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LECTURES

ON THE

THEORY AND PRACTICE OF MIDWIFERY,

DELIVERED AT GUY'S HOSPITAL BY

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Lecture XIV.

On Turning.

In turning, as in most of the obstetric operations, it is a point of no small importance to determine aright on the proper moment of interference; for, like our repartees, our obstetric operations must be exactly timed, to produce their effect. Entering, therefore, on the consideration of this important operation, I may commence by making some observations upon those indications which enable the practitioner to discriminate here.

By some it is asserted, that turning ought never to be attempted, unless the os uteri be widely expanded, or, at all events, relaxed in such degree, that it may readily dilate under the pressure of the finger; nor is the rule to be despised. Generally, when the mouth of the womb is wide open, the hand may be introduced with safety; and this being the case, the sooner it is passed into the uterine cavity the better; while, on the other hand, if the os uteri be rigid, or if it be shut in great measure,—the disc not larger than that of a shilling, for example,—the introduction of the hand is unsafe.

By some practitioners, again, the indication for turning is taken from the laxity of the softer parts; and if the os externum, internum, and vagina, are all of them tense and unyielding, so that the entrance of the hand, perhaps of large size, would be attended with bruising or laceration, we are told to refrain; whilst we are advised to introduce the hand, even though the os uteri be undilated, provided the softer parts, thoroughly relaxed, yield under the pressure of the fingers; nor is this rule without its excellence: for when the parts are rigid, the hand certainly ought not to be introduced; but where they are thoroughly relaxed, with proper caution a gentle operator, with a hand of small size, may often securely enter the genital cavity; and we may be told, perhaps, not without show of reason, that the sooner he operates the better.

There are some practitioners who lay their principal weight on a third indication, I mean the condition of the membranes; and if they find that the membranes, unbroken and still full of water, are pushing through the mouth of the uterus, they refrain from turning, considering that so long as the water is retained, there is no risk lest the child become incarcerated in the uterus, so as to prevent the access of the hand.—But if, on examination, they perceive that the membranes are lacerated, and the liquor amnii away, then, without much regard to the laxity of the parts, or the expansion of the os uteri, they are anxious, as speedily as may be, to perform the operation. Now, of this rule, the latter part lies open to decided reprobation. Admitting, as those who have experience must do, that after the discharge of the water, an early extraction of the child is desirable; we must however admit too, that so long as the os uteri is shut, and the parts are unyielding, dreadful lacerations may result from rash attempts to introduce the hand. With respect to the former division of the rule, that I mean which declares that it is not necessary to introduce the hand so long as the membranes are untorn, and the liquor amnii is retained, to it I do not much object; because I agree, that whilst the liquor amnii is not discharged, there is no danger lest the fœtus becomes compressed and incarcerated, and there is no danger, therefore, lest the access of the hand should be debarred.

For myself, the rules which I observe in discriminating the proper moment for commencing the operation of turning, and which, useful in my own practice, I recommend to yours, are, not to enlarge needlessly, the following:—I lay it down as a principle, in which I think every practical man will

agree, that provided the operation of turning may be performed without more than ordinary risk of bruising, tearing, or other injury, the sooner it is executed the better. If, then, I deem the operation safe and necessary, I do not needlessly delay it an hour—a quarter—I had almost added a minute, or a second; and this, more especially, as before hinted, if the membranes are broken, and the liquor amnii discharged; because, while we are delaying, the womb is generally becoming more active, and more contracted, the dangers and difficulties of the operation continually thickening in consequence. Indelibly, therefore, let this principle be impressed on your minds. Never turn without need, never rashly have recourse to the operation, without considering whether it be or be not safe; but if you are fully satisfied that turning will not be attended with more than ordinary danger, and if you are satisfied further, that there is no reasonable hope that the child may come away in any other manner, the sooner the operation is performed the better.

But you will ask me perhaps here, when are we to consider that the introduction of the hand is unattended with greater danger than ordinary; or, to give the question in a more practical manner, when are we to consider that the danger of turning is no greater than we are justified in imposing? Why, I consider that the hand may be introduced with such degree of safety, as may justify the operation, provided you find the os uteri to be as broad as a dollar; and provided you find too, on pressing in different directions, that the softer parts are thoroughly softened, the patient, perhaps, being the mother of many children, or relaxed by copious floodings. The rule then may be given in few words, as follows:—In ordinary cases, if the mouth of the womb be as broad as a crown piece, and if the softer parts, be relaxed thoroughly, the introduction of the hand is not exposed to greater risk than usual; there seems to be no circumstance preclusive of the operation, and the sooner we commence the better.

The operation resolved on, unless the rectum be loaded I should dissuade from the administration of injections in the way that some have recommended. The intestine, indeed, they clear, but they also stimulate the uterus, and bring on the pains which every one who has had experience of these cases will be solicitous to avoid.

Before turning is attempted, the bladder should be evacuated. This, in general, it may be, by the natural efforts. If, however, the urinary organs be in such a condition that the patient cannot discharge the urine by the natural efforts, provided but little water be collected, the catheter is unnecessary; but if, on making investigation above the symphysis, you find that the accumulation is large, the catheter may be introduced. In different postures the patient may be placed, when you are going to perform the operation of turning; but though you need not always turn under the same position, for ordinary purposes you will find it most convenient to put the woman in the usual obstetric posture, on the left side, close upon the edge of the bed-frame, (if difficulty be anticipated,) with the shoulders forward, the loins posteriorly, the knees upon the bosom, and the abdomen towards the bed—in a word, in the position of this image. Nurses, as formerly observed, are apt to place the patient with the shoulders posteriorly, and the loins in front, as I now place the image,—a position exceedingly incommodious for the operation under consideration.

As to your own posture, you will find it convenient sometimes to kneel at the bed side, a pillow being provided, and sometimes to sit in a very low chair, your position varying as the operation proceeds. Respecting the position of the uterus and the fœtus, and especially of the feet of the child, you ought to have clear ideas before you commence the operation. In a preceding Lecture I observed to you what I now repeat, that the uterus, in the end of pregnancy, lies entirely above the brim of the pelvis, occupying about two thirds of the abdominal cavity; the abdominal coverings and loaded bladder are before it—the intestines and other viscera are above and behind it—and the womb leaning forward, its axis lies parallel with a line stretching from the coccyx to the navel; the fundus pushing forth beyond the ensiform cartilage, and the mouth, seated at the brim, is inclining toward the lower extremity of the sacrum. Nor must we forget the ordinary position of the fœtus, placed commonly in these cases with the shoulder over the os uteri, the head on the cervix, and the feet in the fundus, with the loins and lower limbs carried along with the fundus uteri towards the front of the abdomen, the thorax, head, and arms, lying behind. Do not neglect these hints. To acquire ideas as correct and distinct as may be respecting the position, both of the fœtus and the uterus, is of the greatest importance in this operation.

Before we commence the operation of turning, we ought to ascertain with nicety the position of the feet,—whether they are in the front, or the back of the uterus, at the left side or the right; points best determined by examining the presenting part. And as the arm case is the most common, and as it is unfortunately the most difficult of management, on this case I will demonstrate the method to be observed. Let us suppose, then, a brachial presentation, the arm

lying forth, as in these models, beyond the external parts; we are by examination to ascertain the position of the feet, in order that we may reach them and turn. For this purpose it should be observed, that when the arm is extended, and the hand is placed intermediately between supination and pronation, the palm of the hand takes the direction of the abdomen, and the back of the hand the direction of the loins, the thumb lies towards the head, and the little finger towards the feet. Well, now, applying these principles to the case before us, the palm of the hand lying to the sacrum, I know the abdomen of the child, with its legs, is on the back of the uterus; the thumb lying to the right, I know that the head is to the right; the little finger placed to the left, I know the feet are to the left also; and thus, without inspection, merely by paying a little ordinary attention to the presentation, I am enabled to ascertain that the feet are lying on the back of the uterus, and towards the left side, which, as you perceive on raising this handkerchief, is precisely their position. To repeat then; before you commence the operation of turning, consider what is the bearing of the uterus itself; consider what is the position of the child; and, more especially, consider what is the position of the feet. This accomplished, you need no preceptor to admonish you which hand is to be preferred. Knowing the situation of the child, and the feet, together with your own method of operating, you will discover, on a moment's reflection, whether the right or left hand be the more commodious in any individual case under care. If you think you will be able to reach the feet more readily with the left hand, by all means let this be employed; if otherwise, employ the right. Without intending to prescribe any fixed rule, I may remark, that the woman lying on her left side, the usual position, you will generally find the left hand more subservient, if the feet are in the back of the uterus, while the right may prove commodious, provided they lie in front. Some practitioners always turn with the left hand, and some always with the right; but from the reflections just made, it is obvious that you ought to acquire, if possible, the dexterous use of both.

But to proceed: After a good deal of observation on the operation of turning, I have been induced to divide the turning cases into those in which it is easy, those in which it is difficult, and those few cases in which it is impracticable, either for a time, or permanently, so that you are obliged to resign it altogether.

Cases of Easy Turning.—If you adhere to the wholesome principle formerly announced, and commence the operation of turning as early as the safety of the patient may admit, you will, I believe, in general, find it of easy execution; the woman is as yet unexhausted, the softer parts are relaxed, and the vagina and womb are free from inflammation and tenderness; the cavity of the uterus, capacious and uncontracted, admitting the ready approach of the hand of the operator to the feet of the child, and allowing of an easy evolution afterwards.

In operating in these easy cases, it should be your first office to make choice of the hand with which you mean to act; and knowing, as before advised, the situation of the feet, you speedily determine which of the hands may most readily reach them, and may prepare it accordingly.

In the Gallery of the Louvre, I once saw a painting of the Feast of Belshazzar—*magnifique*, of course—in which the Divine hand was graced with a ring and ruffle. I have heard of a French accoucheur, of finished exterior, who lost in the uterus a very valuable jewel; to our ingenious and lively neighbours it is better to leave "*ces gentillesses*," and should you make use of ornaments, it may be as well to remember that there are occasions when they are better away. The hand then chosen, take off the cost, remove the shirt sleeve, abstract your rings, and with cold cream or lard, best fitted for the purpose, lubricate abundantly the arm, with the back of the hand and knuckles, avoiding the palm and inner surface of the fingers, as this is the part with which you lay hold of the child. Having thus prepared the hand and arm, you throw the fingers into the conical form here demonstrated, and pass them through the os externum upon the promontory of the sacrum, being very careful not to lacerate the perinæum. The passage of the knuckles occasions the principal pain and danger. The risk and distress are greater if the woman have not borne children before. The transition may be facilitated by using the fingers as dilators. With mingled firmness and gentleness the operation should proceed. When the knuckles have cleared the externum, you find the whole hand in the cavity of the vagina, and it becomes your next office to enter the uterine cavity; for which purpose, again giving to the fingers the conoidal form, slowly entering the uterine cavity, you pass the mouth of the womb, always in great measure dilated before the operation can be properly begun. If the membranes have been broken, and the liquor amnii have been discharged, the hand readily enters the cavity of the ovum; but operating early, you will sometimes find that the membranes are not yet ruptured, and to enter them laceration becomes necessary. Whatever is worth doing at all, is worth doing well. Let this part of

the operation, though simple, be carefully executed. When the membranes become tense, under the action of the uterus you have the most favourable opportunity for breaking open the cyst. Be careful to put the hand into the cavity of the ovum, as the interposition of the hand between the womb and the external surface of the membranes might give rise to flooding, by detaching the placenta; throughout the whole of this part of the operation, bear in mind the awful specimens of vaginal and uterine laceration now on the table before you, and beware.

Suppose now that all these measures have been carefully executed; that the cyst has been opened, that the hand has been insinuated; that the os uteri has sustained neither contusion nor laceration; your hand being passed thus far above the brim of the pelvis, and lying in the uterus, you may promptly, tenderly, press forward towards the fundus, so as to bring the brawn of the arm into the vaginal cavity, preventing by this plug the escape of the waters, if they are not already discharged. Your hand lies perhaps amidst the waters; or if the womb be lax and capacious, the hand may be moved about with facility, though the waters have been discharged. Knowing the region of the feet, advance, during the absence of pain, directly to this part of the uterus, usually the fundus, slowly or rapidly as the parts may bear, very careful not to lacerate the womb or vagina,—remembering that at this moment a thrust of the hand is contusion, laceration, destruction, death. The third stage of the operation completed in this manner, and the hand approximating to the feet, in general the arm lies in a line stretching from the umbilicus to the coccyx, the bend of the elbow approaching the key of the pubic arch, the hand lodging in the top of the uterus, and the brawn of the arm taking its place in the cervix uteri and vagina. At this part of the operation, pause for a little,—repose yourselves, and reflect. Preparation thus being made, the fourth stage of the operation commences with the seizure of the feet, you being careful to ascertain clearly that they are the feet, and not the hands; and further, that they are both the feet, and not a foot and hand together, mistaken for them. Having made sure of the feet, grasp them as you please; but you will find it not inconvenient to place two fingers, the first and second, on the back of the legs, so that the fore finger may rest above the projection of the heel, the thumb and two remaining fingers lying on the legs in front. In this way you may secure a pretty firm hold of the legs; the hand, as you perceive, not occupying much space. Having then in this, or any other mode more commodious, acquired a firm hold, slowly, smoothly, and without jerking, you draw, throwing the abdomen of the child upon the back of the uterus; so that at the end of the operation, the legs hanging forth, you have converted a transverse presentation into a presentation of the legs, the front of the fœtus lying upon the sacrum, so that the arms and head may be easily got away.

The legs brought down in this manner, the head and shoulders must be extricated, a part of the operation which may require delays, as the intromission of the hand, of small compass, may have been accomplished with facility and safety, although the parts are too rigid to give passage to the head and shoulders, more especially if bulky. Before the head and shoulders are abstracted, therefore, examine the softer passages, and if they are lax enough to transmit the child without injury to either, let this part of the labour be completed immediately; but if there is a rigidity of the vagina, or a partial closure of the os uteri, so that immediate delivery becomes obnoxious to contusion, fractures, or lacerations; you must wait. While the chord pulsates, the fœtus is in no danger; if the beat of the chord languish, danger may be apprehended Remember, however, that the safety of the mother is paramount, — come what may, her person is to be preserved unhurt; this is a pre-eminent maxim of British midwifery; and if this require that the delivery be procrastinated, however fatally to the fœtus, the birth must be suspended. In our own families, the life of the child would never be put into competition with that of the mother; nor can we err here in adhering to the maxim, equally admired by the saint and the philosopher, to be found alike in the writings of Confucius, and in records more venerable: — Whatever ye would that men should do unto you; that do ye unto them.

The grand error to which you are obnoxious, the error against which you have been cautioned so often on other occasions, is, the use of too much force,—arte, non vi; ferocious, atrocious violence, is to be exploded from midwifery. Contusions, inflammations, lacerations, fractures, decapitations,—these are the tremendous consequences resulting from this error, too well demonstrated by the preparations on the table before you, consequences at once fatal to the mother and the child. Will you offer up their blood to Moloch? that goary Moloch, obstetric violence? Laceration of the womb, laceration of the vagina, extensive laceration of the perinæum,—one or other of these with certainty occurring if you operate rudely, and now and then perhaps when turning is performed with nicest care.

Those make a mock of turning who have never seen its dangers; it is at best a fearful operation.

Of more difficult Turning.—Though always more or less dangerous, the operation of turning may often be accomplished easily enough, provided it be performed sufficiently early, and circumstances conduce. Hence you will sometimes hear your obstetric acquaintance triumphantly exclaiming, "for my part, I always turn without any difficulty,"—a declaration, by the way, which evinces not their superior skill but their small experience in the nicer and more dangerous parts of practice. In consultation especially, we sometimes meet with cases of turning,—embarrassed at once with difficulties and dangers; the body of the uterus is constricted about the fœtus; the mouth and cervix are more or less firmly contracted around the presenting part; the passages are swelled, inflamed, and dreadfully irritable; the patient, wearied with exertion, and desperate through suffering, cannot be persuaded to lie at rest upon the bed; and thus, sometimes, though rarely, a case is created which might try the nerves and the muscles of even those minions of obstetric fortune, to whose superlative skill all difficulties give way.

Called to cases of this kind in the middle of the night, it should be your first care to rouse your drowsy faculties, and to consider with your associate the difficulties which you may have to encounter. A French author somewhere asserts, that there has been more wit in Europe since coffee was introduced. In cases of difficulty and drowsiness, a basin of strong tea is not without its utility,—if green and hot, it is a sort of tenth muse, and has, I am persuaded, in modern times, excited thoughts, less sparkling perhaps, but not less judicious, than the inspirations of those much-vaunted draughts of Helicon, or of the still more poetic cup of coffee and champaigne, which

"Chatouillant les fibres des cerveaux
Y portent un feu qui s'exhale—en bons mots."

In cases of turning, dangerous and difficult, you will sometimes find the patient in a state of excitement, and at others collapsed from extensive laceration or contusion, not always recollected by your predecessor when giving an account of the previous occurrences. Before, therefore, you turn, examine carefully the general condition of the patient; look at the countenance; investigate the pulse; consider the pains;—if the pains are ceasing, if the pulse is 140, if death is in the face,—a strong expression, which you may hereafter understand,—from one cause or another, extensive and fatal injury has been inflicted, and your prognosis must be given accordingly; but if the countenance though flushed is animated; if the pulse firm and round remains about 120 in the minute; if the efforts of the uterus are repeated and violent;—the energies are still unbroken, and much may yet be accomplished.

Further, before you proceed to the operation of turning in cases of this kind, you should prepare the passages for the introduction of the hand by relieving them from the inflammation and irritability. Sixteen or twenty ounces of blood, on an average, you may take away in this view. From 80 to 100 drops of the tincture of opium—for we give the larger doses in those cases—may also be administered with advantage; and with the decoction of poppies or warm water, (the decoction of poppies being preferable, however,) the softer parts may be soothed; after which you often find that the parts sustain the passage of the hand, though previously they could not bear a touch. Before you engage in manual measures, take means for the relaxation of the womb, its mouth and body; for from the constriction of these, the principal difficulty is to be expected. For relaxing the genitals, the tobacco clyster would, I have no doubt, be found of all remedies the most effectual; and much it is to be regretted, that its effects are so dangerous. Of all relaxants the most powerful—it is of all relaxants the most perilous; and although I can readily conceive certain anomalous cases in which its use might be justifiable, yet in the present condition of my information, I have not courage to recommend it to your employment, even in those higher difficulties now under our consideration. In puerperal hospitals the warm bath might, I conceive, be used with advantage, the patient being kept there till deliquium approaches. From the excitement of the bath, a flooding might by some perhaps be apprehended; but a previous venesection would diminish the risk of this; or, should an eruption occur, it would prove rather beneficial than otherwise. A very effectual relaxant is the abstraction of blood from the arm, say to the amount of 20 or 30 ounces; or rather, in such quantity as may give rise to deliquium. That the relaxant has great power, is sufficiently shown by what takes place in placenta cases; for in those cases where three or four pints of blood have been lost, the hand may in general be carried up with perfect ease, the uterus, passive and unresisting, giving way before our pressure. In a dozen cases or more I have had occasion to operate myself, and never do I recollect to have met with any considerable resistance to the entrance of the uterus. It is much to be regretted that

large bleeding, or ad deliquium, is a very rough remedy, nor perhaps wholly without its dangers; one, therefore, which becomes justifiable only when the emergency is pressing.

Though the womb is an involuntary muscle, there seems to be no doubt that it may at length relax in consequence of becoming weary, so that, in the morning of the day, you are unable to introduce the hand; while, in the evening, perhaps, it enters the uterine cavity with facility. Although, therefore, the first effect of delay is an increase of the difficulties of the operation, the ultimate consequence may be a facilitation of it, so that it really seems better either not to procrastinate at all before you turn, or else to procrastinate as long as may be. The risk of spontaneous uterine disruption, and the protracted pains and anxieties which are the results of this dely, constitute the principal objections to it as a general practice. Nevertheless, in those cases in which bleeding, bathing, and other remedies, have been tried without effect, this measure may be thought of; a measure which may recommend itself to the most inert accoucheur, as it simply requires him to sit still.

To relax the womb, you may give opium by injection or otherwise, in large doses, 80 or 100 drops of the tincture, for example, or a propottionate quantity of solid opium, the remedy deserving a fair trial. Of the atropa belladonna, I have had little experience. It is asserted that the extract, if rubbed on the upper part of the vagina, will relax the os uteri; but, till further observation, I cannot pledge myself to the truth of this opinion. A scruple I myself once applied to the mouth of the uterus in a case of dysmenorrhœa, no ill consequences ensuing. Beware of an overdose.

Such, then, are different expedients to which you may have recourse, in order to relax the uterus before you attempt the introduction of the hand,—the belladonna; the larger doses of opium; the weariness of the uterus; the abstraction of large quantities of blood from the arm; the warm bath; and, most effectual of all, though most unsafe, the tobacco clyster.

Not to bewilder you, however, with a multiplicity of remedies, it may be well to remark, that of these remedies there are two on which I rely, in my own practice, and these two are the abstraction of blood, and the administration of opium. Twenty or thirty ounces of blood I usually abstract from the arm, giving, too, 80 or 100 drops of the tincture of opium; and if that quantity do not produce the desired effect, I repeat smaller doses of twenty or thirty drops, administering these until some indication of its effect become apparent,—intoxication, drowsiness, or a diminution of the uterine efforts and pains.

The woman then prepared in this manner, you proceed to the manual part of the operation, of great nicety, requiring a mixture of tenderness, firmness, and no small share of ambidexterity. The passage of the os uteri will be the first difficulty with which you have to contend; the hand being opposed by by the contraction of the womb, about the presentation, and it may be that you operate for fifteen or twenty minutes before you make a safe transition into the uterine cavity: for this be prepared. Beware of impatience and violence. Beware of lacerations. Have mercy upon the patient; again, I say, have mercy upon her. Remember, that a thrust of the hand here is as fatal as a thrust of the bayonet. Wounds more dreadful were not inflicted on the bloody field of Waterloo. Wombs and women are not to be taken by assault. When the hand is carried through the os uteri, you may find it necessary to repress a little the presenting part,—to push the fœtus back hastily and extensively is fatal; you must not even think of it; you will tear the vagina, lacerate the uterus—do both perhaps—how easily too—but can you afterwards repair them? To repress the presentation, however, a little, an inch, for example, so as to allow the fingers to pass, may be allowable, because necessary. Even this repression, however, is always more or less dangerous, and it is best to attempt it when there is no pain. Proceed as I now show you. Your hand in the cavity of the uterus, you have not yet obtained your victory; the great difficulty still remains; I mean the access of the hand to the feet of the child, during which you have to contend with the following obstructions. When the womb is contracted about the body of the fœtus—your hand is much incommoded; it becomes numb, cramped, partially paralytic, and unfit for service; and under the pain which you feel, perhaps drops of perspiration make their appearance on your forehead. Throughout the previous parts of the labour, you have borne the sufferings of the patient with stoical fortitude, and truly christian-like resignation, but you now begin to sympathise—a feeling heart is certainly an honour to its possessor. Well, in this condition, you feel for that part of the uterus which is the most roomy, and there depositing your hand, you repose for a few minutes, careful not to stir the fingers lest contractions of the uterus, and compressions, should again be produced. Be still.

Further. When performing the operation of turning, you have to contend with a second difficulty,—I mean those occasional contractions of the womb which are denominated the pains; contractions which are

exceedingly apt to be produced, when you attempt to make progress towards the feet. Now if the contractions are slight, and rare, you need not interfere. In such cases, it is sufficient to lie quiet during the pains, endeavouring to steal forward afterwards, when the uterus relaxes. Should the womb, however, be angry, and the pains more frequent and violent, more opium must be administered: twenty or thirty drops every quarter of an hour, until its further operation become obvious, or till the uterine irritation be subdued.

In these turning cases, you will sometimes meet with a third obstruction, consisting in a *circular contraction* of the middle of the womb, dividing it, as it were, into an upper and inferior chamber, part of the fœtus lying in both. In passing this sphincter, if you proceed with gentleness, resolutely, yet cautiously, taking time sufficient to judge from two or three cases of this kind which have fallen under my own notice, you will generally find that the hand may, on the whole, be passed with tolerable facility and safety; but beware of force.

Thus then, yielding or encountering these difficulties which oppose your progress, stealing forward when the womb relaxes, reposing when it acts; the hand extending flat upon the fœtus; the knuckles never elevated needlessly as you bear forward, lest the uterus be torn by them; at length you reach its fundus. Now, at the time when the hand is in the fundus uteri, the brawn of the arm lies in the pelvis, the hand bearing forward beyond the ensiform cartilage, and the arm below resting upon the sacrum and perinæum, which you must be careful not to lacerate. If your person be slender, little difficulty will be experienced here; but should you carry much muscle, obstruction may arise, the pelvis being too small to give ready admission to the arm—I mean the bulkier part of it, nor can this difficulty be effectually removed; though your operations may be facilitated, and that too materially, by the copious use of cold cream or lard; or you may send for another accoucheur, who enjoys the necessary physical aptitudes. Women, in choosing their practitioner, should give a preference to those who are of effeminate make; and I feel the more satisfaction in giving this advice, injurious to none, because I know it won't be taken.

Such, then, are the principal difficulties which embarrass the operations of turning: the bulk of the arm; the circular constriction of the uterus; the occasional spasms; the general and permanent contraction of the womb; the constriction of the os uteri. The rigidity of the passages I forbear to mention, for if you operate at the proper moment, it will rarely obstruct you. Through all these difficulties, perseveringly—resolutely—patiently—composedly, without violence, and successfully at last, you struggle at length to the child's legs, and happy you are to feel them. Do not confound the arms with the feet,—an error to which you are obnoxious, when the nicer sensibilities of the hand have been impaired by compression. If both legs are seized, the child will turn more easily. If you can grasp one leg only, let this be brought down; often you may turn by one leg; but should it be necessary to draw down the other, the access to the second will be facilitated by the descent of the first. Should the seizure of the leg be impracticable, I would recommend you to lay hold of the knees, gradually working your fingers towards the feet, in the way here demonstrated. If you are tantalized and baulked, by coming within touch but not within grasp of the feet, so that you can feel but not seize them, you may sometimes overcome this difficulty by changing the position of the patient. The woman turning round slowly, while your hand is in the uterus, by this movement, without further trouble, the feet may be brought among your fingers; so that under this simple manœuvre, although you cannot carry the hand to the feet, you may sometimes carry the feet to the hand, and this without much difficulty. If, however, by none of these measures the feet or knees can be reached and seized, withdrawing the hand, you may pause till you have recovered your strength a little, after which the attempt may be repeated with the same hand, or you may send for another accoucheur. By one or other of these expedients, in most instances you succeed in obtaining firm hold of the fœtal legs; and this accomplished, you draw them slowly into the pelvis, ultimately bringing them forth through the outlet, so as to convert the transverse presentation into the crural. In drawing down the fœtus, let the abdomen be thrown upon the back of the uterus and pelvis, as, under this situation, the shoulders and head will be most easily extricated. It is not by sudden or violent efforts, but by a steady gentle bearing, that the child should be brought down. When the transverse presentations show a disposition to enter the pelvis together with the legs, as shown, the fœtus descending doubled, you may secure the legs by the instrument now exhibited, or by tying a ribbon round one or both ancles, drawn forth for this purpose; and then, pressing the presentation upward with one hand, while you bear forth the legs with the other, you cause the fœtus, as here demonstrated, to revolve upon an imaginary axis, the original presentation passing of consequence from the mouth of the uterus, and the loins and legs descending in its place. From the de-

monstration here given, you may perceive that in this operation the child is not thrown back from the pelvis, so as to extend and endanger the laceration of the womb or vagina; though it revolves upon its axis, its elevation remains unchanged, or, if changed at all, it descends.

When the pelvis is narrow at the brim, space is sometimes wanting there, to give passage to the hand when grasping the feet; the mass formed by the two in conjunction being too bulky. This difficulty may be surmounted by withdrawing the hand, after having seized the feet with the crural forceps here exhibited; or, if you secure the feet, by placing two fingers, the first and second, upon the leg above the heel, the two remaining fingers and thumb being placed in front over the instep, the bulk of the hand may sometimes be reduced to so small a compass in this manner, that the transit of the brim may be accomplished.

One other difficulty I have met with when drawing down the legs, arising from the breech, as here shown, becoming seated over the front of the pelvis, above the symphysis pubis. In these cases, let the nurse, while you are drawing, press steadily and firmly between the brim of the pelvis and the navel, urging the fœtus towards the promontory of the sacrum; and the breech becoming dislodged, the legs will afterwards descend with facility, the delivery being completed afterwards as in ordinary crural presentations.

Composure, perseverance, gentleness, patience, experience, great manual dexterity, and a thorough knowledge of the bearings of the fœtus, womb, and pelvis, are requisite in the accoucher who manages these cases. Lacerations constitute the principal danger; arte, non vi;—of more sudden violence beware: and take care, too, that you are not enticed by degrees to the use of too much force, wheedled onward by the delusive and dangerous, and continually successive expectations, that one ounce more pressure will bear down the obstruction. Ah! this one ounce—only one ounce more—it is this, I fear, which often kills the patient!

Impracticable turning.—But what is to be done in those cases, of rare occurrence, in which the operation of turning cannot be effectuated? Why, if dangerous symptoms demand immediate delivery, embryotomy is, I imagine, the only remaining resource; but so long as no dangerous symptoms press, we may wait, with a reasonable hope that the fœtus will be expelled by spontaneous evolution. Two cases of impracticable turning I have seen, both terminating in this manner.

If spontaneous evolution be obviously begun, turning should not be attempted; if the fœtus is under six months old, the natural efforts may be trusted, and will frequently expel it; if, under your attempts to turn, you feel any fibres giving way, whether in the womb or vagina, withdraw the hand immediately. The body of the womb sometimes yields, but more frequently the back or front of the vagina near the bladder, or promontory of the sacrum. This preparation shows you, that the vagina is not much thicker than brown paper. It is much to be regretted, that we are in possession of no plain indication, enabling us to decide with precision, when our attempts to turn ought to be relinquished as dangerous. The yielding of fibres, vaginal or uterine, is a good monitory sign; but it is to be wished that we had some less dangerous indication.

LECTURES ON CHEMISTRY,

BY

PROFESSOR BRANDE.

Delivered at the Royal Institution of Great Britain.

Lecture XXII.

On the Combinations of Sulphur with Hydrogen, Chlorine, and Iodine; and on Phosphorus.

The combination of *sulphur* with *hydrogen* comes next to be considered, a compound which was first discovered by Scheele about fifty years ago; it may be obtained by presenting sulphur to hydrogen in its nascent state, as by acting upon sulphuret of iron with dilute sulphuric acid.

A hundred cubic inches of *sulphuretted hydrogen gas*, the name given to this compound, weigh 36 grains; its specific gravity to air is as 1.1934 to 1.000, and to hydrogen as 17. to 1. The gas burns when a lighted taper is introduced into it, but the taper is extinguished, sulphur is deposited, and water and sulphurous acid are formed. It has an insufferable stench, producing nausea and vomiting, and is destructive to animal life. Its odour resembles that of rotten eggs. Its solution in water is not uncommon in mineral springs, as in the water of Harrowgate, Aix-la-Chapelle, Bareges, and other places. The solution of sulphuretted hydrogen in water is colourless, transparent, and smells strongly of the gas. You may easily detect it in any mineral water, not only by its smell, but also by introducing into the water a small quantity of lead, which immediately becomes blackened. By this

circumstance we are also enabled to detect lead in water, even in very minute quantities; and you will almost always find traces of lead in water preserved in leaden cisterns, especially when cleanliness has not been attended to; but this subject will come before us again under the subject of lead. Delicate vegetable blues, such as litmus and violets, are reddened by being dipped in a solution of the gas. It combines with a great number of salifiable bases, and forms with them a class of salts which the French chemists have called *hydrosulphurets*. If we burn it in common air, we find that the results are water and sulphurous acid, and we thus arrive at a knowledge of the constituents of the gas. If one volume of sulphuretted hydrogen be detonated with one and a half volume of oxygen, the result is water, and one volume of sulphurous acid equal to that of the sulphuretted hydrogen employed: so that you perceive that by this experiment, we arrive at the conclusion that sulphuretted hydrogen is composed of 16 parts by weight of sulphur, and 1 by weight of hydrogen, and that its equivalent number is 17. Sulphuretted hydrogen is not permanent at high temperatures; if exposed to a white heat, sulphur is deposited from it, and we find also in that case, that one volume of sulphuretted hydrogen produces one volume of hydrogen, and deposits 16 parts by weight of sulphur.

It forms a curious combination with *chlorine*; and the result is *muriatic acid* and sulphur, that is, if the chlorine be not in excess. I shall now send a few bubbles of chlorine into a small jar containing sulphuretted hydrogen, and you will see an instantaneous precipitation of sulphur, and a diminution in the bulk of the gas, because the muriatic acid which is formed, is taken up by the water in which the sulphur is precipitated. The result of this experiment shows, that the hydrogen combines with the chlorine to form muriatic acid, and that, consequently, the sulphur is precipitated.

Iodine decomposes this gas very energetically; and the result is, the precipitation of the sulphur, and the formation of hydriodic acid. Perhaps it may be worth while to show this experiment, as it is a common mode of obtaining the hydriodic acid, and is a very good mode: it consists in passing sulphuretted hydrogen through a strong solution of iodine. You observe from these experiments what a tendency the hydrogen has to quit the sulphur, and to enter into new combinations, and this enables us readily to form compounds with hydrogen, by throwing the sulphur away. *Nitric acid* also decomposes this gas very easily, with great rapidity and intensity; the result is, the deposition of the sulphur, and the formation of water and nitrous acid; the hydrogen abstracting oxygen from the nitric acid, converting it into a nitrous acid, which you may know by the yellow fumes escaping from the vessel. The most curious combination resulting from the decomposition of sulphuretted hydrogen, is by decomposing it with *sulphurous acid*. Sulphur is precipitated from both the gases, and the oxygen and hydrogen unite to form water. This experiment may be easily shown, by mixing the two gases together in a flask; in which, after a little time, you will see the sulphur beginning to be deposited, and this deposition will go on until it is all thrown down.

We have now gone quite far enough to show you the general properties of the gas, and its composition. When *ammonia* is brought into contact with it, they combine and form *hydro-sulphuret of ammonia*, and the combination takes place in equal volumes of the gases. Exposed to the air, it gives out fumes which are, at first, of a white colour, but which afterwards become yellow, and it was, therefore, formerly called Boyle's fuming liquor of sulphur. It is an useful test for the metals, and may be procured by distilling, at nearly a red heat, a mixture of one part of sulphur, two of muriate of ammonia, and six of slaked lime. It would appear probable, that there is another combination of sulphur and hydrogen, which will be hereafter noticed in the history of the metals.

This then brings us to the next elementary body upon our list, which is *phosphorus*, which used formerly to be obtained by a very nauseous and disagreeable process, namely, by the evaporation of urine to dryness, and distilling the residue. We are indebted to Scheele for the knowledge of the means by which it is now easily procured, which consist of decomposing phosphoric acid. Here is some imperfect phosphoric acid, and if I mix it with about one-fourth its weight of charcoal, and submit it to a red heat in a coated earthen retort, the phosphorus passes over the neck of the retort, and then drops into the water contained in the receiver. The chemist is seldom called upon to make phosphorus, because it is sufficiently pure as it is manufactured in the large way, and considerably cheaper than he could make it.

The properties of this substance are very singular, and created great attention on its first discovery. It has a temperature of about 60° or 70°, the consistence of wax, but at a lower temperature it is brittle; its colour varies from a deep yellow to white; it has a peculiar smell, somewhat resembling garlic, and if you expose a stick of it, which has been wiped dry, to the air, you will observe that it is constantly exhaling these alliaceous fumes. There is a very

strong analogy between the smell of phosphorus and electricity; and the fumes, which are constantly exhaled from phosphorus, are luminous in the dark with a bluish light. Its specific gravity is 17, water being 10: at a temperature of 105°, or thereabouts, it fuses, and at a temperature of from 500° to 600° it boils in close vessels, and rapidly evaporates. It requires to be handled with great caution, because when dry it is apt to inflame with the slightest friction; but the flame of phosphorus will not kindle paper, which is easily accounted for; the fumes of phosphoric acid coat over the paper, and prevent it from coming in contact with the oxygen of the air. The temperature at which phosphorus is said to take fire, is about 100°, but if it be coated with an oxide of phosphorus, as it generally is, it takes fire very readily at a much lower temperature, and therefore you should be very cautious how you handle it.

If you burn phosphorus in a confined portion of rare air, it enters into less perfect combustion, and you will find that there are three distinct *compounds*, which it forms by combining with *oxygen*,—an *oxide* of a yellow colour, a liquid acid, and a solid acid; the liquid being called *phosphorous acid*, and the solid the *phosphoric acid*. There is another acid of phosphorus below the phosphorous acid, called the *hypo-phosphorous acid*, which it may be well to mention here, and the table shows you the proportions of oxygen in each, according to the investigations of Sir Humphrey Davy. *Hypo-phosphorous acid* is composed of 45 phosphorus and 15 oxygen, so that its equivalent is 60. *Phosphorous acid* is composed of 45 phosphorus, and 30 oxygen, its equivalent being 75; and *phosphoric acid* is composed of 45 phosphorus, and 60 oxygen, so that its equivalent is 105.

Now the *oxide of phosphorus* is the white substance with which you see the sticks of phosphorus coated, after it has been kept some time in water; it is a very inflammable substance, but less fusible and volatile than the phosphorus, and is generally used for the manufacture of *fire-boxes*. The mode of making these fire boxes is, to put a piece of phosphorus in a small phial, and then to stir it about with a red hot wire, so as to be made to coat the interior of the bottle. A portion of the phosphorus is thus oxidized by its imperfect combustion, and when a bit of it is taken out and exposed to the air on a common match, it instantly inflames, and this is a very simple, and, indeed, the best mode of obtaining light.

Phosphorus is a very large constituent in the animal kingdom; it is found in large quantities in bones, sometimes it is found in vegetables, and at other times in mineral products, namely, in the form of phosphoric acid. We said that we were indebted to Scheele for the present mode of obtaining phosphorus, by decomposing phosphoric acid; and accordingly we burn bones to deprive them of their animal matter, and the residue is chiefly a phosphate of lime, upon which we pour diluted sulphuric acid; a sulphate of lime is formed, and phosphoric acid is left dissolved in the water, which is an impure phosphoric acid, but pure enough for the purpose of obtaining phosphorus. You take 20 pounds of the calcined bone earth firmly powdered, 20 quarts of water, and 8 pounds of sulphuric acid diluted with an equal quantity of water. You mix these well together, and simmer for some hours; you then strain off the liquor, and evaporate it to half its bulk, when it is to be left to cool; a white sediment falls down, from which the clear solution must be decanted and boiled to dryness in a glass vessel. A white mass remains, which, by being melted, forms a transparent glass, that consists of phosphoric acid, some phosphate, and sulphate of lime, and this is distilled with charcoal in the manner already mentioned.

If you saturate the liquid phosphoric acid with ammonia, you obtain the phosphate of ammonia, and if you drive off the ammonia, you will have the phosphoric acid in a state of purity; and this is one of the best modes by which phosphoric acid may be obtained pure.

The *phosphorous acid* is best obtained by mixing chloride of phosphorus with water, and filtering and evaporating the solution; a white crystallized solid is obtained, of a sour taste, and very soluble; it consists of phosphorous acid and water, and is, strictly speaking, a hydro-phosphorous acid. It was first examined in its pure state by Sir Humphrey Davy. The *hypo-phosphorous* acid is prepared by pouring four parts of water upon one part of phosphuret of barium, and when the evolution of the whole of the phosphuretted hydrogen gas has ceased, pour the whole upon a filter. To the filtered liquid, sulphuric acid must be added as long as any precipitate forms; the clear liquor contains the hypo-phosphorous acid in solution, which, when concentrated by evaporation, yields a sour viscid fluid, which is very attractive of oxygen, but incapable of crystallization.

Mr. Brande concluded the Lecture by showing the formation of phosphoric acid by the brilliant experiment of burning phosphorus in oxygen.

In the next Lecture, the remaining compounds of phosphorus will be considered, and the properties and some of the compounds of *carbon*.

FOREIGN DEPARTMENT.

ROYAL INSTITUTE OF FRANCE.

Sitting of the 2d October.

M. Julia Fontenelle presented a head of a New Zealander in a complete state of preservation. The teeth were sound and complete; the hair very black, rough, long, and curled; the skin was of a yellow colour, and the tattooed surface was black, very regular, and smooth. The head appeared to be that of a man about thirty or forty years old. Notwithstanding this, the sutures of the skull were perfectly ossified internally, which is seldom the case, excepting in the skulls of old persons. The occipital region was very large, its projection well marked, whilst the frontal cavity was narrow. There was a vertical bony septum, of more than two lines in height, in the interior of the skull, which the members of the Academy had an opportunity of seeing. This anatomical variety having only been observed in animals, the facial angle of this head, as well as of the inhabitants generally of New Zealand, being very narrow, the frontal cavity very limited, M. J. Fontenelle concludes, that this race may be considered as a sort of link between man and the ourang outang. The head presented by M. J. Fontenelle was evidently not tanned, but had only been immersed in a solution of chloruret of sodium (marine salt), and then slowly dried.

GENERAL REPORT ON THE INVESTIGATIONS OF THE COUNCIL OF HEALTH IN PARIS, DURING 1825 AND 1826.

The number of suicides in 1824 was 371, in 1825, 396, and, in 1826, it amounted to 511. This increase of 115 suicides in one year, appears inexplicable; the assignable motives for the deed are as follow:—

Love, quarrels, or domestic calamities	100
Disease, disrelish for life, weakness, or alienation of mind	148
Bad conduct, gaming, fear of reproach or punishment	69
Misery, indigence, loss of situation, embarrassed circumstances	100
Motives unknown	94
	511

Of this number, 154 failed in effecting their object, and of the 396 suicides in 1825, 117 survived. Thus during 1825, 279 suicides effected; 1826, 357.

Very vague opinions exist respecting the time of the year at which suicides are most frequently committed. Taking a survey of the suicides committed in Paris during nine years, from 1817 to 1826 inclusive, the following is the average number for each month:—

January	213	July	301
February	218	August	296
March	275	September	248
April	374	October	198
May	328	November	181
June	336	December	217

The whole number amounting to 3,185, of which 627 took place in the three months of autumn, 648 in the three winter, 997 in the three spring, and 933 in the summer, months. In the month of April the greatest, and, in November, the smallest number of suicides was committed.

Submersions.

The number of persons drowned in 1825 was 315, in 1826, 376. "This increase," the members of the council say, "was not in proportion with the increase of the population, but it is to the existence of the canal of St. Martin, the approaches to which are not guarded, that we think it is to be attributed." In 1825, 39 persons were taken out alive. Assistance was administered to 73, 57 of whom were recalled to life. In 1826, the number of drowned persons taken out alive was 51. Assistance was administered to 98, 70 of whom recovered. These results are very satisfactory, if it be considered that, in 1825, of 91 drowned persons, to whom employment of means might have afforded a chance, 18 only were deprived of it; and that in 1826, of 109 drowned persons, apparently dead, and who remained less than twelve hours in the water, 11 only did not receive assistance. This result proves how important it is, that the government should watch with care institutions for the recovery of drowned persons, and what may be expected from vigilance, and the early employment of proper means.

General Mortality.

The report of 1825 says nothing on this subject; that of 1826 gives the following results:—From calculations made in the Bureau of the Prefect of the Police, the total number of deaths, for the year 1826, amounted to 25,898,—16,978 of whom died in the twelve divisions, and 8,920 in the hospitals. The diseases were classed by the Council in the following order:

	Males.	Females.	Total.
Pulmonary phthises	1,286	1,849	3,135
Enteritis	1,220	995	2,215
Pulmonary catarrh	912	1,093	2,005
Gastritis	883	951	1,834
Peripneumonia	701	685	1,386

Apoplexy	597	382	979
Scirrhus and cancer	154	506	660
Aneurism of the heart	373	404	777
Peritonitis	207	355	562
Cephalitis	160	151	311
Cerebral fever	280	253	533
Putrid fever	163	93	256
Malign fever	117	98	215
Bilious fever	63	38	101
Inflammatory fever	42	30	72
IN INFANTS.	**Boys.**	**Girls.**	
Convulsions	926	846	1,772
Measles	198	210	408
Croup	154	128	282
Dentition	125	124	249
Small-pox	102	85	187
Still-born infants	717	497	1,214
Infants dead between 1st and 3d month	464	385	849

This table only gives a total of.. 20,001

which leaves 5,897 deaths caused by different other diseases. But those who know with what want of care the causes of death are indicated in practice, will not place much reliance on this classification. It is, however, almost impossible to obtain one more accurate; still some idea may be formed of those diseases which are the most fatal. By adding the number of pulmonary catarrhs to that of pulmonary phthisis, it will be found that this disease is the cause of a fifth of the mortality; and if we take from the above calculation the five thousand deaths occurring in childhood, it will be seen that pulmonary consumption produces more than a fourth of the mortality in adults. The authors of the report are astonished at the mortality in infants from convulsions, measles and croup. According to them, the first, almost always proceeding from irritation of the primæ viæ, may always be prevented by the habitual use of baths and emollients, internally and externally, and the treatment of the two last diseases is now so rationally established, that success ought always to be certain. We do not know where the reporter of the Council of Health derived his notions of these diseases; if it be true that he can almost always cure the croup, he ought to communicate his secret to all practitioners, who would be delighted at the intelligence. We will terminate this extract by an allusion to a very singular phenomenon observed by the Council. There are in Paris two divisions, the third and fourth, in which the number of births is almost always double that of the deaths. There are two others, the 9th and 10th, in which the number of deaths is almost double that of the births. Hence, in the space of five years, (from 1819 to 1824,) there were born, in the third and fourth divisions, 13,520 persons, and there were only 7,981 deaths; whilst in the 9th and 10th there were 33,159 deaths, and only 17,269 births. The Council asks what can be the cause of this difference? It will be found, without any doubt, in the situation of the hospitals, and in the different condition of the inhabitants. The recent investigations, we believe of M. Villerme in particular, show the influence which the enjoyment of comforts and even luxuries have in prolonging the duration of life.

ANATOMICAL RESEARCHES ON THE EPITHELIUM, OR INTERNAL EPIDERMIS, BY M. LELUT.*

It has long been disputed by anatomists, whether the surfaces of the mucous membranes, in the interior of the body, are, or are not, covered by a structure, similar in most of its characters to the enveloping texture of the external surfaces, usually called the *epidermis*. Some have admitted that there is such a covering, and have argued that it proceeds but a little way into the interior of the alimentary tube, and other cavities communicating with the external surfaces of the body; but the extent of this covering has not, hitherto, been very accurately defined. The anatomists of the present day, who have admitted the existence of such a tissue, (here, by way of distinction from the epidermis, called the *epithelium*,) have done so rather from analogy than from demonstrative evidence; founding their reasonings upon the axiom laid down by Bichat, but which it seems he copied from Bonn,† that all the mucous membranes are only a duplicature of the skin in the interior of the animal; and, therefore, that it must, *per consequence*, be furnished with a sort of cuticle, or epithelium. Others have imagined that they have recognized it only in certain points, thus admitting an infraction of the law of continuity of the two teguments, without having been able to point out with certainty the places where it exists, and where it does not exist.

Albinus‡ admitted the existence of the epithelium on the tongue, which he knew was continued from the epidermis; but he does not speak of it as extending to the fauces. Bonn went further than Albinus; he states, that he had traced it as covering the entire buccal cavity and the pharynx; but he did not recognize it as extending

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* Repertoire d'Anatomie, tom. 3. trimestre 2.

† Andreas Bonn, Dissertatio de continuationibus membranarum, t. ii.

‡ Annotationes academ. T. I. Lib. 1. xii.

lower. Haller* admits the existence of the epidermis on all the mucous membranes without exception; he appears to have regarded the internal or villous membranes of the stomach, as a continuation of the epithelium of the œsophagus. But Morgagni,† not content with admitting its existence to this extent, asserts that it not only lines all the great visceral cavities, but also the smallest canals; as, for example, the lachrymal passages, the Eustachian tubes, the parotid ducts, and the mucous follicles. Chaussier,‡ who was acquainted with the arrangement of the epithelium in the œsophagus and stomach of the horse, appears to think that the mucous membrane of the alimentary canal, below the diaphragm, is not a continuation of that of the œsophagus. H. Cloquet has adopted this opinion. Bichat did not think it possible to show the existence of the epidermis on the surfaces of the mucous membrane of the stomach, the intestines, the bladder, and the excretory ducts. Meckel considers that the epithelium cannot be traced below the cardiac opening of the stomach. Beclard was of the same opinion; but he says that it might be traced in the vagina as far as the orifice of the uterus, where it ceased. Such appear to be the principal conclusions arrived at by some of the most distinguished anatomists, respecting the distribution of this structure.

In addition to the ordinary modes of dissection, I had recourse to dissection with a finely cutting instrument, to maceration, to desiccation on a plate of glass, to immersion in diluted acid, and in a weak solution of corrosive sublimate, to coction in boiling water. These two last modes I found to succeed best, but I often dissected the parts under water as well as out of water. In my examination of the structure of the superficial part of the alimentary tube, and of the cavities into which it is continued, I almost always dissected all the tunics of the part, so as not to be deceived by any false analogies, and when the epithelium was exposed, I immediately submitted it to the action of the chemical agents which I have just mentioned. In this way I examined the internal surface of all the mucous membranes, without exception; and am, therefore, able to state, with some degree of certainty, in what parts the epithelium is present, and in which it is wanting.

The epithelium, or internal epidermis, exists only on the gastro-pulmonary mucous membranes, on the genito-urinary, and on the mammary. The external auditory canal is lined with epidermis.

It would appear from these investigations, that the epithelium extends no further than the cardia. I have constantly found four membranes in the stomach and bowels, a mucous, a cellular, a muscular, and a peritoneal; and I have found nothing more. All the other modes of dissection which I employed for the examination of the epithelium, above the cardia, served to convince me that it *does not exist below the diaphragm*.

The epidermis, or the skin of the eye-lids, ceases at their anterior free edge, immediately behind the cilia, which appear to perforate it. Beyond this point the palpebral and ocular conjunctiva present nothing which resembles it; nor could I find any thing analogous to it in the lachrymal passages. The epidermis of the skin of the nose ceases, in fact, about two or three lines in front of the edge of the anterior opening of the nostrils; but in adults, at about the distance of seven or eight lines. This termination is rather abrupt; but beyond that point it presents nothing which can be said to resemble the epithelium.

The mucous membrane of the Eustachian tube appears to want the epithelium at its orifice; but to have that structure continued in the remainder of its course. The cutaneous epidermis, ceases suddenly at the nasal, anal, and ocular fissures, and is continued from the mouth as far as the cardiac opening of the stomach. There is no epithelium on the conjunctiva or its dependencies; nor on the nasal, or anal mucous membranes.

The epithelium does not exist on the mucous membrane of the urinary organs; it exists only on the mucous membrane of the genital organs of women, not of men, extending as far as the orifice of the uterus, and is a direct continuation of the epidermis from the vulva.

Investigations on so delicate and minute a structure as the epithelium, must necessarily be attended with considerable difficulty; and with whatever skill or care they be conducted, the results of such investigations should be received with considerable caution. M. Lelut denies the existence of the epithelium on the inner surface of the stomach and intestines; Professor Rudolphi holds a contrary opinion: the former asserts, that it is wanting on the mucous membrane

* Elementa Physiologiæ Corporis Humani, tom. v. lxii. sect. 1. p. 12. et seq.

† Prodromo della grand' Anatomia. Firenze, 1819.

‡ Journal General de Medicine de Sedillot, tom. xv. p. 33.

of the urinary organs, the latter that he has been enabled to trace it on these parts. Fortunately, however, for mankind, the importance of the subject is scarcely proportioned to its difficulty.

ON TRANSVERSE FRACTURES OF THE STERNUM OCCURRING DURING LABOUR.

FRACTURE of the sternum from muscular action only, is an accident of very rare occurrence, and can only take place, we should imagine, when the sterno-mastoid and recti abdominis muscles are both put in powerful action at the same time, and the portions of the sternum are not very firmly united. Two cases of this kind occurred in the practice of M. Chaussier, physician of the Maison d'Accouchement at Paris; the accident in each case took place during labour, and was followed by the death of the patients.

ROYAL INFIRMARY, EDINBURGH.

Successful Case of Operation for Empyema, supervening on a Fracture of the Sixth and Seventh Ribs.

THE following are the particulars of the case of empyema alluded to in a former report, having occurred in consequence of mechanical injury inflicted on the costal pleura, in a constitution otherwise perfectly sound; its success can scarcely be considered an exception to the usually fatal results of the operation of paracentesis performed for the evacuation of collections of matter in the chest, produced by a different form of disease.

Walter Gibb, a healthy old man of 68, was received into the hospital, under the care of Dr. Hunter, on the 3d of October, for a fracture of the sixth and seventh ribs, which was inflicted by a fall on their angles about eight days previous to his admission. During that time he walked about as usual, without a bandage, or any other precautionary measure, to keep the injured parts in a state of quiescence, which may probably have led to the subsequent inflammation of the pleura in the vicinity of the fracture. On his reception he complained of a severe pain in the side, and difficulty of respiration; his pulse was 100, his bowels costive, and tongue whitish. He was then bled to thirty ounces, from which he expressed himself much relieved. On the day following a stethoscopic examination was made, which indicated an alteration in the pulmonary tissue having taken place in the region of the fracture. During the night his pulse fell to 94, and he seemed as tranquil as the nature of the accident might be expected to permit. The pain of side and difficulty of breathing having again returned on the 6th; he was bled to sixteen ounces, by which he also found temporary relief. The preceding symptoms, however, not being entirely removed by the measures adopted, he was bled a third time to sixteen ounces, and was considered as going on comparatively well from this period to the eleventh, when he had a severe rigor in the night, and the puncture in the vein, and the parts around it, were found to be inflamed, hard, tense, and painful. In consequence of these appearances, Dr. Hunter made an incision into the integuments of the arm, ordered the whole limb to be enveloped in ice, the patient to take the saline solution, with tartrate of antimony, and to be put on fever diet.

On the next day, (the 12th,) the swelling had considerably extended along the arm, being greatest over the biceps muscle; he rested tolerably well, pulse 98, tongue slightly furred, bowels costive, and anxious for a more ample supply of diet. He was bled again to deliquium, which was produced by the abstraction of about sixteen ounces of blood, and the ice and saline solution ordered to be continued as before. Under this treatment he continued from the thirteenth to the twenty-first; he continued to improve; the pulse alternated between eighty and ninety, the pain and swelling of the arm gradually subsided, the wound went on to cicatrise favourably, and he only complained of occasional pain in the side, and of a trivial short cough. On the latter date he became affected with severe dyspnœa, and pain of chest, for which a large blister, with the saline solution and antimony, were prescribed with some benefit.

On the 23d, the pectoral symptoms again returned, and he complained of severe pain in the neighbourhood of the fractured ribs. On examining the side, a circumscribed, inflamed, and pointing tumour, fluctuating to the touch, and reducible by pressure and position seemingly into the cavity of the chest, was detected. Around this tumour, the integuments were also puffy and œdematous, as has been observed in similar cases.

After a short consultation on the 4th of November, the patient was removed to the theatre, where Dr. Hunter performed the

operation, by cautiously cutting through the most prominent part of the tumour, between the sixth and seventh ribs into the pleura with a scalpel, when having penetrated the abscess, and pressure being made on the chest, a gush of healthy purulent matter, to the amount of a few ounces, took place from the incision. A tint of oiled lint having been inserted in the wound, and the patient removed, Dr. Hunter informed the class that he passed his fingers between the fractured ends of the ribs, distinctly felt their rough extremities as if but recently broken; that consequently no effort had been made by nature to repair the injury by ossific union, and that he feared from this circumstance, taken in connexion with the age of the patient, the nature of the affection which attacked his arm during his residence in the hospital, and the reduced state of his general health, he could give but a very unfavourable prognosis of the termination of the case! Art, not nature, in all probability, was here in fault, as walking about with fractured ribs for a week, could not be supposed to have been a state of living the most favourable to the production of an ossific union; and the inflammation excited during that time, with the consequent formation of an abscess around the extremities of the fractured ribs, might have so far explained their non-union during the patient's residence in the hospital, as to diminish the Doctor's surprise at the circumstance, and induce him to deliver a more guarded opinion.

The subsequent, treatment and features of the case, present nothing of sufficient importance, to be reduced into a diurnal register. The pain and difficulty of breathing gradually declined with the expansion of the lung, as indicated by the resonance of the chest on percussion, and the application of the stethoscope. The discharge progressively diminished from about three ounces in the twenty-four hours, until it entirely ceased; and, on the 25th of December, the wound was entirely cicatrised. Having had occasional sweats in the night, he was ordered to take the infusion of roses, with sulphuric acid, until affecting his bowels it was discontinued, and the chalk mixture substituted, which produced the desired effect. A small quantity of wine was allowed daily, with light nutritious diet; and his health is now so far established, that he intends leaving the hospital in a few days from the present date.

Scotus.

Edinburgh, Jan. 6, 1828.

ST. THOMAS'S HOSPITAL.

FRACTURE OF THE SEVENTH CERVICAL VERTEBRA, WITH COMPRESSION OF THE SPINAL MARROW. MR. GREEN'S CLINICAL REMARKS.

H. Cooper, 35 years of age, a stout muscular man, was admitted into the Hospital on 6th of December, under the care of Mr. Green, on account of severe injury to the spine.

The accident occurred on the 1st, five days before admission, from a sack of flour falling a distance of eighteen feet upon the man's neck and shoulders. As soon as he had recovered from the immediate stun of the blow, he found that he was deprived of power in his lower extremities; he was conveyed home, and four hours afterwards was bled. The blood-letting was repeated on the following day; aperient injections were administered, and the bladder being paralysed, the urine was drawn off. These were the principal means adopted prior to the patient's admission into the Hospital.

On examination, the lower extremities were found to be completely devoid of sensation and volition: there was no sense of feeling over the abdomen and lower part of the chest: the penis was not erect, or even partially so. The power of motion was imperfectly executed in the upper extremities; he could only raise his arms to a certain extent: he complained of much pain upon attempting to move his head, and there was also a constant dull pain in this part. The breathing was exclusively performed by the diaphragm, and upon deep inspiration, pain was occasioned. The spine was attentively examined, but no displacement could be detected; Mr. Green was therefore disposed to attribute the paralytic condition to pressure from effusion; he considered that the symptoms were too severe to be the product of concussion simply.

The means employed were, repeated cupping over the spine, the administration of injections, and drawing off the urine three times a day. In the course of a few days after the patient's admission, the urine was decidedly ammoniacal, and soon became highly offensive; the bladder eventually lost its tone, and the urine dribbled away. In this distressing condition, the poor man remained until the morning of the 23d, seventeen days after admission, and twenty-two from the occurrence of the accident. Sloughs had formed on the sacrum and nates, to a very considerable extent.

Post Mortem Examination.

The crura of the arch of the seventh cervical vertebra were found to be broken through; the right inferior oblique process was dislocated forwards to the extent of a quarter of an inch, and there was a transverse fracture through the body of the seventh cervical vertebra. A small coagulum of blood was seen upon the theca, under the arch of the first dorsal vertebra; the membranes about this part were more vascular than natural, and were observed to be much distended. On slitting them open, a considerable quantity of serous fluid escaped, and the spinal marrow beneath the arch of the last cervical vertebra was quite pultaceous; indeed some portion of it was so thin that it was not more than of the consistence of cream.

Mr. Green made some clinical remarks upon this case on Saturday last, in which he observed that there were signs of returning sensation in the lower extremities on the eighth day after the patient's admission, he then being capable of discriminating which foot was touched; but on the following day, the symptoms of returning sensibility had subsided. Mr. Green said, that he was disposed to attribute this circumstance to the fact of there not being much actual compression of the marrow, although there was considerable displacement of bone. He considered, that by the injury which had broken the bone, there was at the same time a lesion of the spinal marrow; that a subsequent inflammatory action was set up, and that at the commencement of this, under the excitement, the slight return of sensibility took place.

The softened condition of the spinal marrow was regarded by Mr. Green as the effect of inflammation, succeeding to injury of its substance, rather than from any compression by the bone.

With respect to the return of sensibility, said to be observed on the eighth day, and so ingeniously explained by Mr. Green, we may be allowed to say that we question whether there was not some illusion on this point. We visited the patient from day to day throughout his illness; and we saw him on the eighth day with Mr. Green, when, from the circumstance of his being enabled to say which foot was pinched, it was considered that sensation had returned.—Now the fact was, that the patient himself saw which foot was laid hold of, for upon examining him subsequently, we found to our complete satisfaction that *there was no return of sensibility.* And this we state, not from any desire of being captious, but with a view of establishing truth, and doing away with what Cullen has properly termed—"false facts."

MALIGNANT DISEASE OF THE FOOT.—AMPUTATION OF THE LEG, BY MR. TRAVERS.

G. K. a baker, ætat. 20, pallid and cachectic in appearance, came into the Hospital on the 20th of December, under the care of Mr. Travers, on account of disease of the left foot.

The whole of the foot, as far as the bend of the ancle, was enormously swollen and distorted in appearance, and about two thirds of the upper part, and a considerable portion of the inner side, were in a state of ulceration. The sore was superficial, irregular, and covered with a dirty yellowish slough; there was a thin discharge, having an offensive odour of a peculiar kind. The portion of the foot not ulcerated was very much indurated, and the integuments of a purplish colour; on the outer part was observed a distinct tubercular projection. The toes were somewhat œdematous, and there was swelling at the under part of the foot. The account which the patient gave of the origin and progress of the disease was, that about one year previously he received severe injury to the foot from a horse trampling upon it, that it became swollen and painful, and he was lame for a considerable time, although he went about his ordinary employment. He had recourse to various means under the directions of several surgeons, such as leeches, fomentations, poultices, &c., but with little or no relief. At one period, a few months after the injury, under the use of poultices, a small sore formed on the dorsum, which healed in the course of a few days. At length small tubercles formed, and these growing from time to time, and then ulcerating, constituted the disease with which the patient was admitted into the Hospital.

Mr. Travers, on examining the case, stated his opinion to be, that the disease was of a malignant nature, and consequently incurable; he therefore recommended the limb to be removed. There was no glandular enlargement or thickening of the absorbents at any part of the limb; the man, as we before stated, was cachectic in appearance, but his general health had not really suffered much; the diseased part was very painful, and precluded sleep.

The limb was removed below the knee, by Mr. Travers, on Saturday, Jan. 5th, and the patient at the conclusion of this report, (the 8th,) is going on well.

THE LANCET.

London, Saturday, January 12, 1828.

We are rejoiced to observe the activity which pervades the profession in promoting the cause of medical reform. Meetings of practitioners have recently been held in various parts of the country, and we have received several drafts of petitions intended to be presented to Parliament, which are all animated by the best spirit, and which we have only forborne to insert, because they in fact re-echo the sentiments of the London petitioners. Let Surgeons throughout the kingdom persevere in this course, and they may count upon a speedy triumph. They have nothing to apprehend but from a relaxation of their own exertions; for the opposition they will have to encounter on the part of the expiring surgical oligarchy is absolutely contempible, and there is every reason to believe that the legislature is disposed, not merely to entertain the question of reform, but to lay the axe to the root of the tree of corruption; to cleanse the Augean stable of medical abuses, and to carry a comprehensive scheme of reform into effect.

Thursday, the 14th of February, is the day appointed for the delivery of the thing called the HUNTERIAN ORATION; and we have reason to believe, that it is the intention of the SURGICAL COMMITTEE to convene a general meeting of the profession for the following Saturday. At this meeting, much may be effected; in fact, if decisive, energetic, uncompromising measures be adopted, the object which every independent member of the profession has most at heart may be at once accomplished. Above all, let no half measures be countenanced. The root of the evil lies in the irresponsibility of the Council, and in their consequent corruption and imbecility. To listen to any terms of conciliation, therefore, which might be offered by such a body, would only lead to a perpetuation of the evil. The whole system of government, as regards the surgical profession, must undergo an entire change before security can be afforded to the public, or the members of the College can be restored to dignity and respectability.

We have just received a document which furnishes an additional proof, if indeed additional proof were wanting, of the base, sordid, and grovelling spirit, which uniformly characterises the proceedings of the Council; a spirit, which is not only utterly at variance with the sentiments that ought to animate a scientific body, but which is calculated to increase tenfold, the mischief that has already flowed from their baneful domination. The Council have just put forth a new series of regulations, and, considering the circumstances under which they have been promulgated, and the opportunities the Council have had of retracing their steps, are far more detestable in spirit, and more likely to be injurious in their operation, than any that have preceded them.

To this precious document we shall have frequent opportunities of adverting, before the general meeting takes place. In the mean time, we earnestly exhort every member of the profession to be upon the alert. The oligarchy is expiring. The Hydra of medical corruption is at its last gasp, and one well-directed blow may rid us of a monster, whose noxious influence has retarded the progress of science, disgraced the character of British surgery, and rendered the profession an object of public scorn, or of public apprehension.

The College has once more set in motion the base tools of its infamous power; and its members are to be again traduced and vilified, in order that an imbecile and worthless faction may triumph over the rights of their professional brethren; but we have possession of the field, and THE LANCET IS UNBROKEN.

Considering the inexpediency of a compulsory system of apprenticeship, and of its projected modification, to the true interests of the Dublin College of Surgeons, as sufficiently established, we shall proceed to examine the justice of the measure, as it affects the student and society. The discussion of the question under these comprehensive heads imposes on us the necessity of advancing principles which may subject us to the Sardonic surprise of a certain class of men, who have hitherto looked on medical corporations as self-existent bodies, connected by no stronger ties of social obligation with the rest of mankind, than the receipt of a fee, and the exaction of some petty tax for the privilege of acquiring professional information. Entertaining somewhat more extended views of social relations than these gentlemen, we must inform them, however disagreeable the announcement may be to their corporate sensibility, that the constitution of this country does not sanction any chartered body in the exercise of functions independent of the general welfare of the community. All the institutions of this kind with which we happen to be acquainted were, at least in the object of their establishment, inseparably associated with the common good of the state; being designed for the double purpose of performing some public duties, and promoting the prosperity of such as sought a means of living through their instrumentality. The same spirit of British freedom and justice which thus wisely united corporations with the prosperity of each department of society, also requires that no unnecessary obstacle should be opposed to the admission of those persons who wish to avail themselves of the advantages which they confer. By this moral attribute of the country, comprehending the happiness of all without infringing on the rights of any, the tendency of humanity to abuse chartered power has been repressed; and, acknowledging no personal distinctions, the qualified claimant has been protected from corporate exclusion. In the salutary influence of this national usage, we find a security against the possibility of any industrious individual being excluded on unjust grounds from the high honours of an alderman or lord mayor, in consequence of the neglect of duty or perversion of charters by our civic authorities. From the operation of this law of equality no sphere of society has been exempt, having given the diplomatic talents of a cotton manufacturer's son to direct the councils of a king, and filled the archiepiscopal throne of Dublin and all Ireland with controversial dissension with the offspring of a mohair-button maker. The Dublin College of Surgeons, however, has taken quite a different view of the "social compact," and of the rights of their countrymen. They claim an entire exemption from the irksome bond of reciprocal obligation, and will neither fulfil the conditions of their incorporation, nor admit of their performance by others. Medical advice and medical education are with them a species of commodity, of which they conceive that they alone have the right to fix the price. The practitioner must receive a certain sum for his professional assistance, and pay himself at a defined rate for the liberty of affording it, or society is to be deprived of aid, and individuals prevented from supplying it on more moderate terms. Money, in short, is the standard which they assume for the estimation of practising, and learning in an efficient manner the science of medicine and surgery. That the profession over which they preside is no less a source of life than a means of living to thousands; that the invalid looks to it for cheap and effectual relief,—the father, as a provision for his offspring; are considerations on which they never bestow a thought. Now, if these rational expectations of patients and parents ought to be seriously taken into account in the regulation of the medical policies of any country; that country, we have no hesitation in saying, is Ireland. The candidates for

professional honours there, and the population by whom they are subsequently to be supported, partake of the proverbial poverty of that part of the empire. It is well known that the former are derived from the middle rank of life, with no superfluous property to be expended on the extravagant regulations of Colleges or Universities; and that the latter does not include what can be called a resident aristocracy, or even a wealthy stock of yeomanry, from whom the round sums laid out on education might be afterwards collected. Yet, of the consequences of neglecting these important circumstances in adapting laws to the condition of the country, no men can be better informed than the leading members of the medical corporations of Dublin. The painful remembrance of having experienced in their own instances the "res angusta domi" need not now be forced on the attention of many of them who have risen to eminence and affluence from actual indigence. They are also perfectly aware, that perhaps in no part of Europe is medical advice obtained at so high a price as in Ireland; often, in fact, amounting to an absolute prohibition of its being sought for even by respectable families; and that when it is procured at a lower rate, it is in general from an inferior order of practitioners, but little capable of administering it in a proper manner. Seldom indeed a day passes without some of these principal advocates of expensive tuition and advice having an unfortunate victim of ignorance forwarded to them to Town, whose treatment enlivens the monotony of consultation by eliciting sarcastic jokes on the Edinburgh Sangrados of the provinces. With a knowledge of the cause, and the power of preventing such occurrences, this conduct of the "lions" of the metropolis is, to say the least of it, extremely inconsistent; for, of the practice which they thus condemn, and the practitioners whom they affect to hold in the utmost contempt, they themselves are, in point of fact, the legitimate source. In turning both into ridicule, they overlook the disparity of their regulations to the exigencies of the society for which they are presumed to have been framed. They forget, in the indulgence of their contemptuous sallies against every practitioner not of the Dublin College of Surgeons, that apprentice fees, hospital fees, diploma fees, member fees, all fixed at a rate higher than in any other country, are the true causes of the expatriation and ignorance of the Irish student, and the consequent loss of competent medical assistance to the majority of the population of the country. With all these facts before them, their independent notions of corporate rights would seem to justify them in the enactment of by-laws hostile to the general welfare of society. Their exalted ideas of the respectability of the profession, excluding every consideration of its true objects, require degrees of rank and fortune as qualifications for its pursuit, which the majority of its members can never possess. Their opinions of the value of medical advice are scarcely less extravagant, being estimated at a price which the multitude are unable to pay; and a general practitioner in England might well smile at the honourable scruples of the Irish profession on the subject of fees. To such an extent have the latter foibles been carried in the councils of the Irish College, that we have known one highly respectable licentiate of that body to have been refused admission as a member, because his father at one time shod horses; and another ignoble wight threatened with the "black bruns" for the vulgar crime of having received a silver fee for his services. Such conceptions of the dignity of the healing art, honourable, like every other line of business, only in proportion to its utility, and, after all such vapouring, followed in general for its profits, are excessively silly, if not mischievous. No aristocratic prejudices of its members should, or indeed ever can, en-

tirely exclude persons, otherwise qualified, from its exercise; or prevent them from using their discretion in regulating their bill by the means of those whom they attend, rather than by any vain regard to professional respectability. We would, therefore, appeal to the better sense of the leading members of the College, if it would not be more consistent with their duty as directors of a national establishment, designed for the diffusion of medical education and the security of the public health, to take these plain objects of their incorporation into consideration, than to separate themselves from that union of interests which binds the several departments of society in a state of reciprocal dependence. And by holding out in support of useless ceremonies of tuition, to deprive the pupil of the sources of information; the patient of effectual and attainable advice; the parent of a provision for a part of his family; and to render those local advantages for the conducting of a great school of medicine and surgery unavailing, which Dublin, we believe, possesses to a more ample extent than any other British capital.

A FRIEND of ours was sitting lately in CALLOW and WILSON's Reading Room, when that facetious wight, JOE BURNS, entered, and took up the first weekly excrescence of MACLEOD's YELLOW FUNGUS. He had just raised it to reading distance, when he suddenly removed it from the neighbourhood of his olfactory organ, with a gesture and expression of face indicating strong disgust. JOE was asked what he had got there, "a Bat's * * * *" was the short reply; affording an unexpected confirmation of the naturalist's remark on the bat-kind; "alvi dejectiones in hoc genere fœtore horribili imbutæ sunt."

A GARBLED, and, in many respects, an erroneous statement, has gone forth respecting a duel which recently took place between Dr. FORBES and a M. TONSON. We abstain from alluding further to this transaction until an authorized account of it, which is in preparation, shall be presented to the public.

VERY IMPORTANT INTELLIGENCE!

MR. BRODIE, the eminent surgeon, when opening the body of the late Earl of Pembroke, cut his finger with one of the instruments he used on that occasion, and was so ill for several days afterwards, as to be incapable of attending his patients.—*Morning Post.*

On Monday morning last, at nine o'clock precisely, a cat sneezed at the door of No. 14, Saville Row.

EPITAPHIUM

LAPIDI INFELICIS ISTIUS LITHOTOMI

BENJAMINI TRAVERS

INSCRIBENDUM.

QUI MODO TOT SECUIT SANOS MINUS ARTE PERITUS
INVENIT LAPIDEM: NE DUBITES; OBIIT.

ALTERUM.

INVENIT LAPIDEM TRAVERSIUS; ANNE REQUIRIS
PLURA? VEL HOC IPSUM SAT MONET; OCCUBUIT.

A Practical Essay on Stricture of the Rectum; &c. By F. SALMON, Surgeon to the General Dispensary Aldersgate-street. London: Whittaker, and Callow and Wilson. 8vo. pp. 180.

THE author of this work, announces in his preface that his object is "to prove that stricture of the rectum is a very common disease, inducing other important affections, and that surgery furnishes us with means adequate to its removal or alleviation, provided *such* means are exercised with judgment and science."

The first chapter, in accordance with the fashion of the times, is devoted to the anatomy and physiology of the part. We shall leave this, and proceed to the analysis of the second chapter, which treats of the causes and different kinds of stricture.

In the consideration of the *causes*, the opinion of Mr. White of Bath is quoted, who affirms that the predisposing cause of stricture of the rectum is a congenital narrowing of the gut, at or about the termination of the sigmoid flexure of the colon. In this opinion the author of the work before us fully concurs, and, in confirmation, states that he has found stricture existing in children at a very early age; he has also known the disease to prevail in several members of the same family. Habitual costiveness, the use of drastic purgatives, and "indigestion," are further enumerated as causes of stricture. A peculiar constriction of the *anus*, Mr. Salmon also regards as an occasional cause. On this subject he says,

"The exceeding thickness, and consequent powerful action of the sphincter ani muscles, opposes (oppose) the natural action of the bowel, which causes patients to strain violently, and the abdominal muscles thus excited press upon the superior part of the gut and sigmoid flexure of the colon, giving rise to contraction in those parts more especially. I have scarcely ever found this constriction unattended with obstruction very high up in the rectum. There is a remarkable similarity between this instance and that of contraction of the orifice of the urethra, which will invariably be found connected with stricture in the bulb, or membranous part of the canal—generally the former."

It is not quite clear to us, however, that this constriction of the anus does not stand in the relation of an *effect* to the stricture, rather than a *cause*. The next source of stricture, to use the words of the author, is "an enlarged and tender condition of the uterus;" the enlargement of the womb in such cases by pressure occasioning a partial obliteration of the intestinal cavity, and, ultimately, fistulous communications forming between the vagina and rectum.

We could here wish Mr. Salmon had been more precise with respect to his definition of the uterine disease, for we must confess our scepticism as to the enlargement of the uterus producing stricture simply from pressure; we should rather be disposed to refer the affection of the bowel to one common disease, attacking both it and the uterus. If we admit that an enlargement of the womb will, from its mechanical effect, produce stricture of the gut, we should expect to find this disease prevailing in various enlarged conditions of the womb, for instance, pregnancy.

Lastly, amongst the causes of stricture, piles, tumours, or excrescences growing in the bowel, and enlargement of the prostate gland, are spoken of. With respect to fistula in ano, the author believes that it occurs more frequently "as a consequence, than as a cause of stricture."

"In short," observes the author, "any cause, constitutional or mechanical, creating irritation in the rectum, may ultimately induce spasmodic action of its muscular coat; this, in process of time, will become permanent; in the commencement creating simple spasmodic stricture, and, from continuation, permanent affection of the part."

Mr. Salmon thinks that the greater portion of strictures are simply spasmodic in the beginning, with no organic alteration; but he states that, from continuance of disease, the bowel eventually becomes indurated and thickened, so as to lose all traces of its original structure, and assume the appearance of a fleshy chord.

In reference to the morbid anatomy of stricture, he observes that the internal surface of the mucous coat of the bowel, in most instances is not "much changed," but that, in some cases, where the disease has been of long standing, accompanied with much irritation, he has seen patches of ulceration—and, in extreme cases, adhesions between the rectum and bladder, uterus and vagina, and fistulous communications between these parts.

Further,—

"In some instances, bands of a firm consistence extend from side to side, forming septa across the bowel, while in others it is contracted at a particular part in a circular form, the gut immediately above, from the perpetual lodgment of faeces, being dilated in the form of an hour-glass. But the peculiar and morbid change generally found, appears to be the result of severe thickening of the bowel, from deposition in the cellular substance between its muscular and mucous coats. In the worst cases of stricture this will, occasionally, be found converted into a kind of gristly substance, possessing, nevertheless, a character very different from the true scirrhous affection of the intestines.

As regards the *situation* of stricture, the author remarks that it is, for the most part, at a distance of five or six inches from the anus, and that next in frequency it is found at the junction of the sigmoid flexure of the colon with the rectum. The true carcinomatous stricture, it is stated, is most usually near to the anus.

The symptoms are next considered, and described in a brief and perspicuous manner. Subsequently to this, we arrive at an important point,—the treatment, which is divided into constitutional, and surgical, "or that connected with the introduction of intruments."

In the constitutional treatment, topical blood-letting, by means of leeches or cupping, is recommended; the necessity of attending to the condition of the bowels is forcibly dwelt upon, as also the ill-effects resulting from the irritation of violent purgatives. Castor oil, and electuary of senna, with sulphur, are recommended to be taken in such quantities as may produce an evacuation daily. Oleaginous injections, daily administered, are also said to be greatly conducive to the regularity of the bowels, and, in some instances, even to supersede the necessity for aperient medicine taken by the mouth. On dietetics our author enlarges considerably, severely animadverting on those "who spur beyond its wiser will, the jaded appetite;" then we have a tirade against drinking at meals, tea, and the "injurious custom of taking late dinners." On these subjects we may be allowed to remark, *en passant*, that attempts to lay down general rules, with respect to diet, are absurd in the extreme.

In considering the surgical treatment of stricture, with reference to the use of the bougie, Mr. Salmon observes, that this is one of the most important curative means, and he gives ample directions for the introduction of the instrument, which he observes should be not less than eleven inches in length, and should be passed into the sigmoid flexure of the colon; the operation is to be repeated at intervals of four or five days, and the bougie to be gradually increased in size. The kind of bougie which Mr. Salmon recommends, is that made of plaster, which, previously to using it, should be immersed in hot water.

The operation of dividing the stricture, a practice which we believe is recommended in certain cases, even by Wiseman, is said by Mr. Salmon to be seldom or ever practicable, inasmuch as he is of opinion, that its seat is usually beyond the reach of the knife. We may here observe, that there are cases in which the stricture is near to the anus, and consists simply of a membranous band, a division of which is attended with the most favourable result; many cases of this description have fallen under our observation.

On carcinomatous stricture of the rectum, to which a chapter is devoted, we find nothing particularly worthy of remark. The author next proceeds to the *effects* of stricture, which are well illustrated by a series of instructive cases; first, showing various consequent diseases of the urinary organs in the male, and upon the genital organs (the uterus and vagina) in the female.

Two cases of enormous permanent distention of the colon are recorded, occurring as the consequence of a stricture of the rectum; the concluding portion of the volume is appropriated to the conside-

ration of piles, as the effects of stricture; and there are several cases of this nature detailed, which, in a satisfactory manner, point out the connexion existing between the two complaints, and which of course is of the utmost importance in the treatment.

Upon the whole, the work contains many sound remarks, and is creditable to the author, who evidently brings to the discussion of the subject no inconsiderable share of practical information.

Medico-Chirurgical Transactions, Vol. XIII. Part II. 1827. Longman and Co.

[*Concluded from page 472.*]

The possibility of the occurrence of complete dislocations of the vertebræ without fracture, has long been a disputed point among many of the first surgical writers. Boyer and Sir A. Cooper are of opinion, that such an accident cannot happen; and Delpech, in his Précis Elémentaire des Maladies reputées Chirurgicales, asserts, without qualification, that a careful examination of the form and situation of the bones, must convince the observer that such accidents cannot occur. The following case, however, related in an excellent paper by Mr. Lawrence, sets the question at rest:—

"Case.—Charles Butcher, twenty-two years old, was admitted into the hospital at five o'clock, P.M., January 8. He was completely insensible, incapable of voluntary motion below the neck. Had slipped in descending some steps, and fell on his buttocks, whilst carrying a heavy barrel on the back of his head and neck. Functions of the brain not disturbed; respiration apparently performed merely by the diaphragm; pulse weak and slow; body cold; penis in a state of permanent erection. No irregularity of the spinous processes could be discovered. In four or five hours pulse became full and strong, heat of body greater than natural, respiration rather hurried. Venesection to ℥xvi, a dose of calomel and jalap. Four ounces of urine drawn off by the catheter.

"Jan. 9. Pain at lower part of the neck. Can move the arms slightly, and has a little feeling in the front and upper part of the chest. Dark offensive stools pass involuntarily; respiration slower; pulse full; heat natural.

"10. Feels better. Slept three or four hours in the night for about an hour each time, has experienced a trying sensation in the hands, and is sensible to impressions on the upper part of the arms and thighs; stools pass involuntarily; complains of distention of the bladder; eighteen ounces of high-coloured urine were drawn off, and deposited a dark brown sediment. The priapism continues. Four ounces of urine drawn off in the evening.

"11. Has not slept during the night, and is worse this morning. Respiration becomes more difficult, so that speaking requires a painful effort; countenance expresses distress and anxiety. He expired at one o'clock on the morning of the 12th.

"*Examination.*—No displacement nor irregularity could be discovered by external examination, when the body was laid on the face. After cutting away the muscles from the back of the spine, the cartilaginous surfaces of the superior articular processes of the fifth cervical vertebra came into view; they were exposed in consequence of the inferior processes of the fourth vertebra having been *completely dislocated forwards*, and remaining fixed in their unnatural position. The yellow ligaments connecting the laminæ of the two vertebræ were torn through, and the biped apex of the fourth spinous process lay in close contact with the basis of the fifth. On the front of the column an unusual projection was observed, but the anterior longitudinal ligamentous expansion was entire. *The body of the fourth was completely detached from that of the fifth vertebra*, the connecting fibro-cartilage being torn through, and *the body of the former projecting by its whole depth in front of the latter.* * * *"

It is not the least curious part of this interesting case, that no deformity in the bones of the spine could be discovered by external examination. Mr. Lawrence also states, "that, on a cursory view of the patient, there was nothing alarming in his situation." These facts, connected as they are with the great extent of injury which the vertebral column had sustained, ought to act as a warning to practitioners against giving a hasty and inconsiderate diagnosis or prognosis in accidents of the vertebræ.

Dislocation of the Atlas and Axis from Disease, with consequent Anchylosis.—A very remarkable example of this description is related by Mr. Lawrence.

"Case.—A child, at the age of *seven*, became the subject of an illness, supposed to be hydrocephalus. A swelling formed in the side of the neck of some magnitude, and obviously containing fluid. Pressure on this swelling affected the brain, producing coma; at length the tumour disappeared. During the progress of the complaint there was no interruption or diminution of sensation or voluntary motion, and the recovery of health and activity was complete. There was nothing particular to attract notice in the position of the head. The child died of disease in the lumbar vertebra, at the age of *twelve*.

"*Examination.*—The head was examined during the hottest part of last summer, and the brain had become so soft, that the changes produced in it by disease could not be ascertained. Mr. Wigan brought to me the basis of the skull, in which we were surprised at observing a considerable bony prominence standing up in the right side and front of the foramen magnum. The projection in question was smoothly covered by the dura mater, and it was soon apparent that it must be the dentiform process of the second vertebra. When the soft parts had been completly removed by maceration, I found an extensive displacement of the occiput, atlas, and axis, and a firm consolidation of these bones in their new relative positions by the complete bony anchylosis of several articulations. The atlas is partially dislocated towards the left, and at the same time thrown a little forward and upward; hence the right and posterior part of its bony ring intercepts a considerable portion of the spinal canal. The middle anterior protuberance now corresponds to the left side of the basilar process; the extremity of the left transverse process projects three quarters of an inch beyond those of the two following vertebræ, while the right transverse processes of those vertebræ project one quarter of an inch beyond the corresponding one of the atlas. * * * The axis is completely dislocated from the atlas and occiput to the right, so that its left portion intercepts about one-third of the spinal canal, and the dentiform process projects by its whole length into the cavity of the skull, at the anterior part of the foramen magnum, close to the right anterior condyloid foramen. In the natural position of the parts, the apex of this process is a little below the level of the occipito-atlantal articulation; here it is an inch above the same level, while its projection into the cavity of the skull is between five and six-eighths of an inch. The lateral displacement is no less extensive; the measurement from the left anterior condyloid foramen to the middle of the basis of the dentiform process being seven-eighths of an inch, while the distance from the right foramen to the same point is only two-eighths. * * * * The bodies of the second and third vertebræ are displaced towards the right, so that a line drawn along their middle and continued upwards would strike the right margin of the basilary process; and the small tubercle on the anterior arch of the atlas corresponds to the left side of those bodies. The right occipital condyle, the remains of the right transverse of the atlas, the inferior articular plane of the axis, and the right side of the basis of the dentiform process, are anchylosed, so as to form one solid bony mass. The left occipital condyle is partially anchylosed with the atlas; the left articular plane of the axis, its transverse process, and that of the third vertebra, are all consolidated with the partial anchylosis just mentioned. The articular processes of the axis and the third vertebra are anchylosed, the union extending on the left side, as far as the bases of the spinous processes. The bodies of the axis and third vertebra are not anchylosed.

"The preternatural bony connexions, just enumerated, are perfect, equalling in solidity the natural bony structure, so that the limits of the anchylosed bones are confounded. The bony texture is quite natural; there is no roughness of surface, no diminution of solidity, nor any appearance of caries. The dimensions of the vertebral canal, at its commencement, are greatly reduced by the extensive displacement of the atlas and axis. The antero-posterior diameter of the foramen magnum is, in this case, one inch and a half: the greatest measurement, from side to side, is one inch and a quarter. The diameter of the ring of the third vertebra, from side to side, is seven-eighths of an inch, from front to back six-eighths. The measurement of the canal, between the displaced portions of the atlas and axis, is half an inch from before backwards, and five-eighths of an inch from side to side."

Mr. Lawrence observes, that "the history and examination of this case clearly show, that the opinion originally entertained of its being hydrocephalus was altogether erroneous, that the primary disease was an affection of the articulation, the fluctuating tumour in the neck being a chronic abscess consequent on that affection, while the

spontaneous disappearance of the tumour is referrible to the cessation of the irritation which caused it. The swelling bore the same relation to the vertebral disease, that lumbar abscess does to disease in the lumbar region of the spine.

Mr. Lawrence has noticed several curious facts connected with this extraordinary case, the most remarkable of which may probably be found, in the circumstance of there having been no inconvenience experienced by the patient from the pressure of the dentiform process of the second vertebra, on the under surface of the medulla oblongata. That it occurred in a gradual manner there can be no doubt; still, when we take into account the length of the projection, and the importance of the part on which it intruded, the absence of both pain and paralysis is another fact in proof of the extraordinary accommodating principle with which life is endowed. A still more extraordinary case of anchylosis than the foregoing, is mentioned by Sandifort, in his *Museum Anatomicum*, in which the occiput, all the cervical, and the two upper dorsal vertebræ are firmly consolidated, the head being strongly twisted to the right, so that the left side of the alveolar arch corresponds to the middle of the bodies of the vertebræ. The parts anchylosed in this remarkable specimen, are the occipital condyles, and front of the foramen magnum, to the atlas; the latter to the dentiform process, that process to the occiput; the articular processes, and the laminæ of all the enumerated vertebræ. The bodies of the vertebræ were still connected by their fibro-cartilages. Instances of disease in the upper cervical vertebræ, although seldom noticed by English surgical writers, are, as Mr. Lawrence correctly observes, by no means uncommon. Of the continental authors, Professor Rust has probably given the best account of the disease, having met with no less than thirteen cases, in all of which the symptoms were nearly alike.

- - - - - "Pain in the neck, becoming more severe at night, or in swallowing a large mouthful, or drawing a deep breath, is the first symptom. This pain affects one side of the neck, especially when the head is moved towards the shoulder; it extends from the larynx towards the nape, and often to the scapula of the pained side. No external alteration is perceptible, but firm pressure on the region of the first and second vertebræ produces considerable pain, and thus points out the seat of disease. The difficulty of swallowing and breathing, and hoarseness, increased, alternating with pain in the neck, which seems to fix about the back of the head, and becomes intolerable on moving that part. The head sinks towards one shoulder, the face being turned a little down, for, in general, the articulations are affected on one side only, and that was the left in seven out of nine examinations after death. If both sides are affected, the head will incline directly forwards. In this state things continue for several weeks or months, and before worse symptoms come on, there is often apparent improvement, freer motion, and more natural situation of the head. But the uneasiness in speaking and swallowing returns, the pain becomes more severe and extensive, the head falls a little backwards, and sinks towards the opposite side. The patient feels as if the head were too heavy, and he carefully supports it with his hands, when he moves from the sitting to the lying position, and *vice versa*. This may be considered a pathognomonic symptom of the affection. Another symptom which, at this period, shows the true nature of the disease, is a peculiar expression of pain in the countenance, which, combined with the position and stiffness of the head, constitutes so characteristic an assemblage of appearances, that it is enough to have seen it once, in order to recognise it again immediately. More active indications of severe suffering are observed, whenever the head is moved. In the further progress of the case, noise in the head, deafness, giddiness, cramps and convulsions; partial paralysis, particularly of the upper limbs, loss of voice, purulent expectoration, and hectic symptoms, supervene. Generally, no external change is observable, either in the neck or in the nape; and Rust observed, in one case only, swelling of the affected side, which broke and left fistulous ulcers. But the slightest pressure in the region of the three upper vertebræ, is acutely painful; and sometimes, in the advanced period of the disease, a grating of rough surfaces is distinctly perceptible when the head is turned. The patient may continue for months in this helpless and painful state, and then dies either from ex-

haustion, or, which is more frequent, suddenly and unexpectedly."

Such is the account given by Rust of this appalling disease, and in the accuracy of which, Mr. Lawrence appears fully to concur; the latter gentleman observes, that

"The principles of treatment applicable to these cases in the commencement and during the process of disease, are the same which guide our conduct when disease is seated in other parts of the vertebral column. The immediate vicinity of so many important organs, renders it a matter of great consequence to lessen the degree and extent of inflammation, and thus to limit the disorder in its early stage, to the parts first attacked. The local abstraction of blood, with the other parts of the antiphlogistic plan, and perfect rest of the affected bones, should be persevered in until all symptoms of active mischief are removed. Counter-irritation in its various shapes, and more particularly by moxa, seton, and issue, will contribute essentially to assist the subsequent restorative process."

In the propriety of these directions, all practitioners of experience will readily acquiesce; but as persons of a scrofulous diathesis are most commonly the victims of these formidable affections of the vertebræ, it may be well to suggest the propriety of confining the antiphlogistic treatment to the first stage of the disorder, and in such habits, even up to this period, local is in all cases preferable to general depletion. Quietude cannot be too strictly enforced.

The two succeeding papers are by Mr. Lawrence, and Mr. White of the Westminster Hospital, on the treatment of *nævi materni*. It is the object of these Gentlemen to show, in the removal of such affections, the superiority of ligature over that of the knife. With this view, they have given a brief account of nine cases thus treated, eight of which were completely successful. In the ninth case, a small portion of the nævus, which was not included in the ligature, grew rapidly, after the other portion had completely sloughed; and at the time the paper went to press, Mr. Lawrence remarks, that it is doubtful whether another operation will not be necessary for the removal of the renewed growth. The method of applying a ligature in these cases, was, to pass

"A large curved needle, containing it, under the middle of its (the tumour's) basis, carrying the point of the needle in and out again, close to the edge of the base of the swelling. When the needle had been cut out, the two ends of the ligature, which had been left of equal length, formed two distinct ligatures, one of which was then tied on each side, as tightly as it could be drawn, just in the line of distinction between the tumour and the skin."

In small nævi, or in those which have small pedicles, it is probably unnecessary to pass a needle under the base of the tumour, or to apply a double ligature, although, in those swellings, correctly denominated by Mr. Wardrop, subcutaneous nævi, both precautions probably are desirable. For the effectual strangulation of the blood contained in large tumours, the double ligature is decidedly necessary, as it gives a much greater command over the parts, and compresses the vessels with much more powerful effect.

"The ligatures (says Mr. Lawrence) must be drawn very tightly, and ought, therefore, to be so strong, as to bear the utmost force we can employ with the finger and thumbs, without breaking—stout silk twist will answer the purpose; but we should observe the precaution of trying its strength previously."

In the majority of the foregoing cases, the ligatures were removed at the end of forty-eight hours with perfect safety, affording immediate ease to the patient. In one instance, Mr. Lawrence removed one of the ligatures "at the end of twenty-four hours, when the whole tumour became instantly distended with blood, regaining its original size and purple colour;" wherefore Mr. Lawrence properly recommends "that they should not be removed until about forty-eight hours have expired after their application." When the slough has been removed, poultices applied to the wound were usually sufficient

to accomplish the healing of the cavity and complete the cure.

Two cases of nævus on the face, successfully treated by Mr. Wardrop with the *kali purum*, are related in THE LANCET, Vol. XI. page 653.

Dr. ELLIOTSON has related several cases of chronic diarrhœa, (many of which have been already reported in this Journal, (successfully treated with sulphate of copper and opium. The dose in which these medicines were usually given, was from half a grain to two grains of the former, combined with from half a grain to a grain and a half of the latter twice a day, allowing at the same time a milk diet, arrow root, beef tea, sago, and a little wine. When the abdomen was very tender or painful, the application of a blister was deemed necessary. In the last case mentioned, the disease had been of four years standing; stools ten a day, and bloody; ordered a grain each of the sulphate and opium, twice a day. In a short time the salt was increased to a grain and a half three times a day. In a fortnight, the stools were reduced to two or three in the twenty-four hours, the dose of the sulphate being augmented to two grains and a half, conjoined with a grain and a half of opium; the motions rapidly regained their natural frequency and consistence, and the man was discharged cured. Three grains of the sulphate three times a day, is the largest quantity Dr. ELLIOTSON has prescribed; but this he has given frequently. As it has a tendency to produce vomiting and griping, he invariably combined it with opium, a grain and a half of which he always found quite sufficient to prevent three grains of the sulphate from griping, even in the slightest degree.

Mr. WALLACE, of the Charitable Infirmary, Dublin, has communicated a paper on what he calls "*Fungous Eruption.*" The following is his description of the disease:

"A number of tumours, some about the diameter and elevation of a filbert, others as large as a small walnut. On an accurate examination, they were observed to be crusted, or covered, with a yellow brown scab, and to be surrounded, to the extent of about two lines, by an areola of livid-coloured skin, which was rough, in consequence of desquamation of its cuticle. On removing the scab or crust, it was found to form a covering or cap to a fungus or excrescence, of a pale dirty pink colour, having but little sensibility when handled, and exactly resembling in figure a small mulberry or raspberry. There were also on many parts of the surface of the skin, marks or stains of a rounded form and livid colour, of the same diameter in general as the fungi, scarcely elevated above the surrounding skin, wrinkled, and in some situations with the cuticle covering their surface in a state of perforation."

A patient thus affected was speedily cured by taking ten grains of the blue pill every night, until his mouth became sore. Infants at the breast were cured, as in syphilis, by giving mercury to the mother. Mr. Carmichael, in his work on the venereal disease, has alluded to a somewhat similar affection, which he cured by administering pitch pills. As it has never fallen under our notice practically, we can say nothing of the complaint. Since the paper was first written, Mr. Wallace has met with some cases, which induce him to believe that the disease is infectious.

Mr. LANGSTAFF describes several preparations in his museum, with a view to prove the possibility of ossific union of fractures of the neck of the thigh-bone, within the capsular ligament, a fact, we conceive, incontrovertibly established by the preparation forwarded to the London Medical Society, last winter, by Mr. Chorley, of Leeds, an accurate description of which, was long ago published in this Journal. Nevertheless, great credit is due to Mr. Langstaff, for the industry he has displayed; and still greater credit is due to Mr. Amesbury, for his improved method of treating these accidents.

There are three or four other papers, but as they contain no information of practical

importance, which has not been long known to the profession, we must refrain from making any further extracts, having already exceeded the limits we had allotted to a consideration of this work.

A TRIFLING ERROR.

BY PROFESSOR COLEMAN.

"The hoof is always conical."—Prof. Coleman's Book, 1802.

"I cannot see that the hoof is a cylinder. The hoof is a cone."—Prof. Coleman's Lectures, 1828.

"In describing this part of the hoof (the wall), we have, in compliance with first impressions, and customary habit, considered it as conical. It would not be right to quit this subject without observing, that this notion is by no means correct; much use in handling the hoof has taught us otherwise, though we have been cautious in stating it at once, for it is our wish to make these remarks intelligible to every class of readers; so that we studiously avoid the use of the technical phraseology of the art, so equally we would desire to avoid the use of terms belonging to other sciences, that are not in use in these arts. There appears, however, no other source of communicating our ideas, than by sacrificing our wishes in this respect; for the sciences are so interwoven, that they cannot be understood sometimes but by each other's aid, and to leave incorrect ideas would be more culpable than such a step. The figure of this part of the horse's hoof, then, is truly a cylinder, very obliquely truncated; its truncated extremity brought to the ground. To show this distinctly, I exhibited formerly, in some discourses I gave on this subject, a cylinder of brown paper, and this I cut obliquely till it gave the figure of the hoof of any slope in front; so that at a distance it could not be known from the actual hoof. It is also readily seen by placing one limb of a carpenter's square beneath the foot across the quarters, then sloping the other limb backwards against the quarter, parallel to the front, when the edge of the iron would be found parallel to the side of the hoof. In many feet there is, however, a very small spread downwards, but less than could be imagined from a transient view of the foot. This understood, will lead the sculptor and veterinarian to a more just conception of the figure of this part: it is, indeed, its cylindrical form that causes the back line of the hoof at the heels to slope in the same course as the front line of the toe."—Vide Mr. B. Clark's work on the Foot and Shoeing, p. 20.

The Reader will recognise at a glance the extraordinary aptitude and felicity of Mr. Clark's illustration, and also the Professor's glaring ignorance, in giving it a conical form. The fibres of the hoof, it may be observed, are running parallel from the coro-

net to the base: now there can be no parallel lines in a cone; they must diverge from a point, otherwise it is no cone at all.

To obtain a knowledge of such an organ as the horse's foot, it is of importance, and even of necessity, that we should have a correct notion of its general figure; and it is not too much to say, on looking at the diagrams, that any man who can entertain the idea that the hoof is a cone, or any part of one, can have no true knowledge of its real structure; and such is, unfortunately, the case with Mr. Coleman. But it is not of the mistake only that we complain, it was an universal one until Mr. Clark published his discoveries; and Mr. Coleman, no doubt, received this error with many others, when he stepped from the medical profession to the veterinary chair, and quitted the pestle and mortar for the hammer and pincers; but why, when fifteen years ago its cylindrical form was made manifest, does he continue to teach the pupils that the hoof is a cone, and even sturdily assert that Mr. Clark is wrong, against such palpable evidence? We must admit, that the Professor is fully borne out by his own case, in stating that surgeons do not always succeed in the veterinary art.

Is it worthy a man of science, to reject such a beautiful illustration, because it is the discovery of another? Or, rather, does he not refuse to admit the truth of one of Mr. Clark's doctrines, lest the remainder should follow, to the defeat and rejection of his own? Professor Coleman, your conduct is unworthy of the gentlemen whom you are appointed to teach!

WESTMINSTER MEDICAL SOCIETY.

5th January, 1828.

Dr. Robert Lee commenced the business of the evening by reading to the society a communication "on the best method of accomplishing delivery in presentations of the superior extremities, where turning is unadvisable or impracticable."

He stated in a very clear and forcible manner the fatal effects which often result from long-continued and violent efforts to turn, where the liquor amnii has been evacuated for many hours, and the uterus has been contracting strongly around the body of the child. In four cases which he related, where blood-letting and opium had failed to control the inordinate contractions of the uterus, and where rupture or dangerous contusion of the soft parts of the mother were obviously threatened by a continuance of the labour, he delivered by extracting the child double, as in spontaneous evolution of the fœtus. This manner of accomplishing delivery in these cases, he particularly described, and represented as both easier and safer than that of separating the head from the body, as lately recommended by Dr. D. Davis in his Elements of Operative Midwifery.

Dr. Lee, in conclusion, begged to caution the members of the Society from supposing that he wished to abandon the common operation of turning, wherever a reasonable hope existed of saving the child's life and that of the mother.

In the discussion which ensued, Mr. Jewell, Dr. Barry, Mr. Mackelcan, severally spoke, but nothing material transpired.

Mr. Mackelcan then read an essay on mediate auscultation, showing the applicability of this diagnostic means to various diseases.

Mr. Bennett and other members were *pro*, and Dr. Gregory, with Dr. A. T. Thomson, were *contra*. The discussion will be renewed at the next meeting.

WRIST-DROP OF PAINTERS.

To the Editor of The Lancet.

Sir,—As I am informed that I did not make myself perfectly understood by some gentlemen, at the last meeting of the Westminster Medical Society, I beg to add the following explanation of an invention referred to in the debate of Saturday evening; and, if you deem it worthy of a place in your widely-circulated Journal, it will contribute to make the invention known not only to the members of the profession, but to those who are still more interested than medical men in its general adoption.

Mr. Woodman, of Piccadilly, has taken out a patent for a painting brush, having a reservoir *at the upper end*, which, when filled with paint, acts as a *counterpoise* to

that which is held suspended or entangled among the hairs at its inferior extremity.

The utility of this contrivance will be felt by workmen in making the up-stroke with the exterior muscles of the hand, as is always done.

A house painter having been at work some hours with the common brush, experiences what is technically called the wrist-drop, through fatigue, and I conceive that the repeated occurrence of this distressing circumstance lays the foundation of that more permanent falling of the hand to which painters are liable.

It will also in some degree account for the return of the complaint after it has been relieved by medical treatment.

On this ground I think Mr. Woodman's invention one of considerable importance, for by throwing the weight of the paint to the upper extremity of the brush, *its gravity is made to assist the muscles of the fore-arm in drawing the alternate stroke upwards*: thus tending in the first instance to prevent exhaustion of their powers, and, in other cases, concurring with the use of medicine and other means, to their lasting recovery, whether their state, so like palsy, depends on mere fatigue, or arises from the deleterious properties of lead.

I am, Sir,

Your very obedient servant,

N. BINGHAM.

Piccadilly, Dec. 24, 1827.

MUSCULAR CONTRACTION CURED BY MOXA.

To the Editor of THE LANCET.

SIR,—Should you agree with me in considering the following case of sufficient interest to the medical world, I shall feel obliged by the insertion of it in your valuable publication as early as possible.

I have the honour to be, Sir,

Your most obedient servant,

PATRICK MACINTYRE.

Bury St. Edmunds, January 3, 1828.

Whilst on a visit to a friend in the summer of 1819, Miss P—— sustained a violent fall on a gravel walk, and received a cut across the inner side of the carpus, just over the annular ligament. The wound was not properly attended to at first, and in a few days it became inflamed and irritable. Soon after it was healed, the fingers began to contract spasmodically, and shooting pains were felt along the course of the nerves of the arm. The wrist likewise became bent inwards. The affection gradually progressed in this way for several months; the muscular rigidity becoming (if nosologists will allow the latitude I assume to the following terms) actually *tetanic*; and the neuralgia bearing close affinity to the exacerbations of *tic douloureux*. The arm shrank, and lost all sense of touch. Friction, stimulating embrocations, repeated blisters, &c. were respectively resorted to at this time, ineffectually. No diminution of the pain was obtained, and as little relaxation of the muscular rigidity, in so far as I have been made to understand.

Three years after the accident, the young lady sought the advice of those *clarissimi viri* in surgery, Sir Astley Cooper and Mr. Cline. The former recommended a splint and roller to keep the fingers and wrist extended. Mr. Cline advised hot salt water fomentations. Neither gave very flattering hopes of relief. Mr. Cline's remedy, which I believe was first tried for some time, seemed to be beneficial; under its application the fingers became moveable, though weak and almost useless. The painful affection of the nerves was little, if at all relieved. It ought to be stated here, that previously to this partial recovery, Miss P. experienced a fright, to which she mainly attributed the restoration of voluntary power. Be that as it may, the relief was but temporary. In a few months the fingers and wrist inclined to their former bent position. The fomentations were continued ineffectually. Sir Astley Cooper's plan was then resorted to, and continued for nearly a twelvemonth; but the difficulty of extending the hand and wrist being very great, and no ease or relaxation being obtained, that too was abandoned.

In June last I was consulted. The phalanges were contracted and doubled up close, and the carpus was twisted and drawn in upon the forearm. It was with great difficulty and excruciating pain to the patient, that the work of extension was accomplished. There was no possibility of keeping the fingers extended with a single splint and roller. The fingers soon clinched together, or burst the roller by the violence of the spasmodic action. Double splints were at this time of little more use. I soon began to agree with my patient and others who saw the case, that little was to be expected from the mere mechanical violence of extension; indeed I was convinced, that under such circumstances, as in displaced fractures, violence would rather frustrate than further relaxation. The *vatio symptomatum* was, however, here, as in all cases of the sort, sufficiently obscure; and the question requiring solution appeared to me to be, to *which* affection should I first turn my attention? If relief were afforded to the *neuralgia*, would that under the circumstances—the long standing of the case espe-

cially considered—assist in the removal of the rigidity, or *vice versa*? The MOXA had been used successfully in separate muscular and neuralgic affections, and I resolved to try its efficacy in this double case.

The moxa was accordingly applied in the usual and now generally understood form, over the carpus and along the forearm, every second or third day. Sometimes it was held near and long enough to produce vesications and subsequent ulcerations, which were washed with a solution of sulphate of copper; but for the most part these effects were avoided. After six weeks' continuance of this mysterious agent, the violence of the pain sensibly subsided; and the periodical attacks (for, like tetanus, the pain was periodical, although at last, the periods of ease were "few and far between") became less frequent. The antagonist (extensor) muscles, whose power had been so long subdued, now exercised some influence. In two months the fingers were moveable, and sensible to the touch. The pain commensurably decreased, and now allowed sleep in the night, which had for a long time been a stranger to the unfortunate and suffering young lady. By a steady perseverence in the moxa, she began to use her fingers in a month more; and, at the expiration of the fourth month, could use her needle, and knife and fork. The splint and roller, which were recommenced when the contracting muscles became more pliant, have been discarded for the last six weeks. Miss P. has been from under my care for about a month, and I understand is daily gaining strength in the hand and arm, the latter of which is now of the same calibre as its fellow. The pain is entirely gone. I ought perhaps to mention, in justice to another mysterious agent, that after the phalanges became flexible, and when the spasmodic pains supervened with violence, which they frequently did, the insertion of an acupuncture needle always produced instantaneous relief. The moxa, however, was always sufficient to produce the same favourable effect.

ST. BARTHOLOMEW'S HOSPITAL.

STRANGULATED EXOMPHALOS IN THE EIGHTH MONTH OF PREGNANCY.

ELIZABETH WRIGHT, æt. 31, was admitted into this Hospital on the first of October, 1827. She is a thin woman, has borne seven children, and is now in the 7th or 8th month of her eighth pregnancy. She states that there has been a swelling at the navel from her infancy, and that she has always worn a bandage till her present pregnancy. During her former pregnancies, the part has invariably swelled and become painful between the fourth and fifth month; purgatives have always removed these symptoms until the present occasion, when they entirely failed. On Sunday, Sept. 30, she was attacked with severe pain in the umbilical region, and with vomiting, for which she took pills and castor oil without relief. At the time of her admission there was a a large irregular soft swelling at the umbilicus, about two inches in diameter, not very tender, and being obviously a rupture, containing principally omentum. The abdomen was neither tense nor painful; the pulse was frequent and hard, the woman was thirsty and feverish, and she vomited occasionally. Castor oil was given, and rejected; injections were administered, and returned unmixed with feculent matter; 30 leeches were applied to the abdomen, and the taxis tried ineffectually. Mr. Lawrence, who saw the patient at this time, found the swelling very soft, and free from pain, and the abdomen nearly in the same state. Had these points been alone considered, strangulation would not have been suspected; however, the constipation and vomiting showed that the course of the intestinal contents was obstructed, and a portion of intestine might easily be concealed under the soft mass of omentum composing the bulk of the swelling. Mr. Lawrence, therefore, determined to operate immediately, considering the state of pregnancy rather as an additional reason for, than as an objection to, the operation. When the sac had been laid open by a perpendicular incision, carried over the middle of the tumour, a large portion of omentum and a small portion of discoloured intestine were exposed to view. The intestine being returned, and a part of the omentum removed, one or two small arteries were tied, and the wound was brought together with sutures and adhesive straps; her bowels were moved four or five times after the operation, and she slept at intervals during the night. Towards the morning she complained of pain in the umbilical region; there was a little inflammation around the wound, which occasioned tenderness of the parts. The tongue was coated, and the pulse full and frequent; venesection to sixteen ounces; twenty leeches to the abdomen; a drachm of sulphate of magnesia in mint water every three hours.

Oct. 3. She passed a restless night, and is more feverish to-day. Venesection to sixteen ounces; twenty leeches to the abdomen; a drachm of Epsom salt, in the effervescing draught, every three hours; bread poultice to the wound, which appears healthy.

4. She slept better, and is less feverish; the bowels are open, and the tongue clean and moist; pulse 112, and rather sharp. The wound is nearly healed, except at the upper part. Repeat the bleeding to fourteen ounces; continue the draught.

8. She has improved in every respect during the last few days; the tongue is clean, and the pulse slow and soft. This morning a small abscess was opened, which had formed upon the tumour, and discharged a considerable quantity of healthy pus.

19. She continues improving, but complains of weakness. Meat diet.

26. A truss was ordered for her this day, and she left the Hospital soon afterwards.

GUY'S HOSPITAL.

REMOVAL OF THE BREAST, BY MR. CALLAWAY.

Mr. Callaway removed the breast of a female on Tuesday sennight, in consequence of carcinomatous disease. The particulars of the case were, briefly, as follow:

The patient was 44 years of age, of fair complexion, and enbonpoint; a married woman, but had never borne any children. Her general health had always been good, and the menstrual discharge regular, until within the last nine months. Five years ago she received a blow on the left breast, which occasioned considerable inflammation, and in consequence leeches were applied; the part however got well, and she experienced no inconvenience till about three quarters of a year previously to her admission. At this time she discovered a hard swelling in the left breast, which gradually increased and became very painful.

When admitted there was a hard flattened tumour, occupying the site of the left mammary gland, of about the size of a goose's egg, irregular or tuberculated on its surface, and slightly adherent to the parts beneath. Dividing the tumour into three parts by supposed transverse lines, the nipple might be said to have been placed at the commencement of the lower third; it was very much retracted, and the skin to some extent around was puckered.

The nipple became retracted about three months after the appearance of the tumour, which commenced just above the nipple, on the inner side.

The operation itself consisted simply in dissecting out the diseased mass; two oblique elliptical incisions were made through the skin; the upper apices of these incisions being towards the axilla. It was found, after the whole substance of the mammary gland had been taken away, that there was some disease existing immediately above the breast, and two hardened portions were removed from this part, apparently diseased absorbent glands. We omitted to remark there was no axillary glandular enlargement. The subclavian artery was compressed, and in consequence but little blood was lost in the operation, which was performed with great dexterity and coolness.

FISTULA IN ANO, WITH STICTURE OF THE RECTUM, SUCCESSFULLY TREATED BY AN OPERATION.

A. Davis, ætat. 31, was admitted under the care of Mr. Morgan, on account of fistulous disease, with obstruction, in the rectum.

The account which she gave was that several years previous to admission an abscess formed near to the anus, which, after discharging a considerable time, at length terminated in a small fistulous opening, and remained in a chronic state for a very long time. Subsequently to the formation of the fistula she experienced difficulty in passing her fæces, and the obstruction went on gradually increasing until at length the motions were flattened, figured, and not in larger pieces than a leech.

On examination, Mr. Morgan found a small fistulous opening on the side of, and near to, the anus, communicating with the rectum, *above* an annular stricture which existed at about two inches and a half up the intestine.

The treatment employed consisted in passing a bistoury up the fistulous opening, meeting its point in the gut *above* the stricture with the finger, then drawing the instrument downwards, and thus cutting through the stricture, at the same time dividing the gut and sphincter.

There was very little hæmorrhage succeeding the operation; the wound was dressed with lint, which was renewed from day to day, until at length it was filled with granulations, and thus a perfect cure established.

The patient left the Hospital, about six weeks after admission, quite well; she was detained for some time by a smart attack of erysipelas affecting the head.

ERRATA.

Page 338, for "epistoles," read *epistolis*.

Page 342, for "*dist de domicile*," read *droit de domicile*.

At this festive season, printers have a prescriptive privilege for committing more blunders than usual.